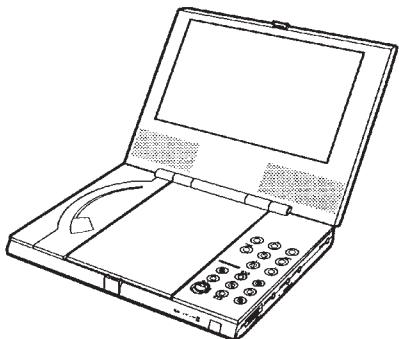


SHARP SERVICE MANUAL

S00J7DV-L78U/



PORTABLE DVD VIDEO PLAYER

MODEL

DV-L78U

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.

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1. IMPORTANT SAFEGUARDS AND PRECAUTIONS

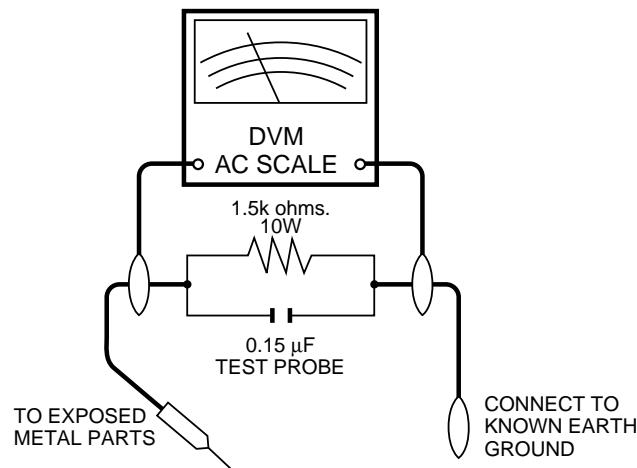
1. IMPORTANT SERVICE NOTES

BEFORE RETURNING THE DVD VIDEO PLAYER

Before returning the DVD video player to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the DVD video player.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators etc.
3. To be sure that no shock hazard exists, check for current in the following manner.
 - Plug the AC line cord directly into a 120 volt AC outlet (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit.
 - Use an DVM or VOM with 1000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor (See Diagram).
 - Move the resistor connection to earth exposed metal part having a return path to the chassis (metal cabinet, screw heads, knobs and control shafts, etc.) and measure the AC voltage drop across the resistor.

Reverse the AC plug on the set and repeat AC voltage measurements for each exposed part. Any reading of 0.45V rms (this corresponds to 0.3mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the DVD video player to the owner.



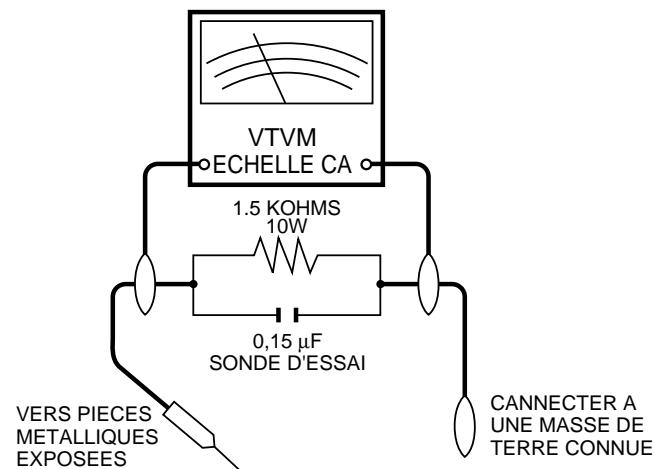
1. NOTES DE SERVICE IMPORTANTES

AVANT DE RENDRE LE REPRODUCTOR DE VÍDEO DVD

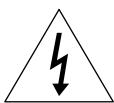
Avant de rendre le reproductor de vídeo DVD à l'utilisateur, effectuer les vérifications de sécurité suivantes.

1. Vérifier toutes les gaines de fil pour être sûr que les fils ne sont pas pincés ou que le matériel n'est pas coincé entre le châssis et les autres pièces métalliques dans le reproductor de vidéo DVD.
2. Vérifier tous les dispositifs de protection tels que les boutons de commande non métalliques, les matériaux d'isolation, le dos du coffret, les couvercles de compartiment et ajustement ou les boucliers, les réseaux de résistance / condensateur d'isolation, les isolateurs mécaniques, etc.
3. Pour être sûr qu'il n'y a aucun risque de choc électrique, vérifier le courant de fuite de la manière suivante.
 - Brancher le cordon d'alimentation secteur directement dans une prise de courant de 120 volts. (Ne pas utiliser de transformateur d'isolement pour cet essai).
 - Utiliser deux fils à pinces et connecter une résistance de 10 watts 1,5 kohm en parallèle avec un condensateur de 0,15 μF en série avec des pièces du coffret métallique exposées et une masse de terre connue telle qu'un tuyau ou un conduit d'eau.
 - Utiliser un DVM ou VOM avec une sensibilité de 1000 ohms par volt ou plus ou mesurer la chute de tension CA entre la résistance (voir diagramme).
 - Déposer la connexion de la résistance à toutes les

pièces métalliques exposées ayant un parcours de retour au châssis (coffret métallique, têtes de vis, boutons et arbres de commande, etc.) et mesurer la chute de tension CA entre la résistance. Inverser la fiche CA (une fiche intermédiaire non polarisée doit être utilisée à seule fin de faire ces vérifications.) sur l'appareil et répéter les mesures de tension CA pour chaque pièce métallique exposée. Toute lecture de 0,45 V rms (ceci correspond à 0,3 mA rms CA) ou plus est excessive et signale un danger de choc qui doit être corrigé avant de rendre le reproductor de vidéo DVD à son utilisateur.



WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO WET LOCATIONS.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electric shocks.

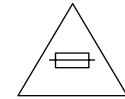


This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

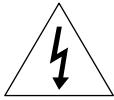
CAUTION

This symbol mark means following.

For continued protection against fire hazard, replace only with same type fuse F9001 (4A, 63V) on DC-IN jack PWB or F9002 (1A, 63V) on DC/DC CONV. PWB or F9901 (1.5A, 63V) on CCFT INV. PWB.



**ATTENTION: POUR REDUIRE LES RESQUES D'INCENDIE OU DE CHOC ELECTRIQUE,
NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.**



ATTENTION

RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR



ATTENTION: AFIN DE REDUIRE LES RISQUES DE CHOC ELECTRIQUE, NE PAS RETIRER LE COUVERCLE, AUCUN ORGANE INTERNE NE PEUT ETRE REPARÉ PAR L'UTILISATEUR, CONFIER L'APPAREIL A UN DÉPANNEUR QUALIFIÉ.



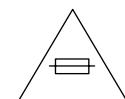
Ce symbole signale à l'utilisateur la présence d'une tension non isolée à l'intérieur de l'appareil qui peut être la cause de secousses électriques dangereuses.



Ce symbole avertit l'utilisateur que des instructions importantes relatives à l'utilisation et à l'entretien se trouvent dans le manuel accompagnant l'appareil.

ATTENTION

Ce symbole signifie que l'on devra utiliser un fusible de même type F9001 (4A, 63V) on DC-IN Jack PWB or F9002 (1A, 63V) on DC/DC CONV PWB or F9901 (1.5A, 63V) on CCFT INV. PWB. pour assurer la sécurité.



WARNING—FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

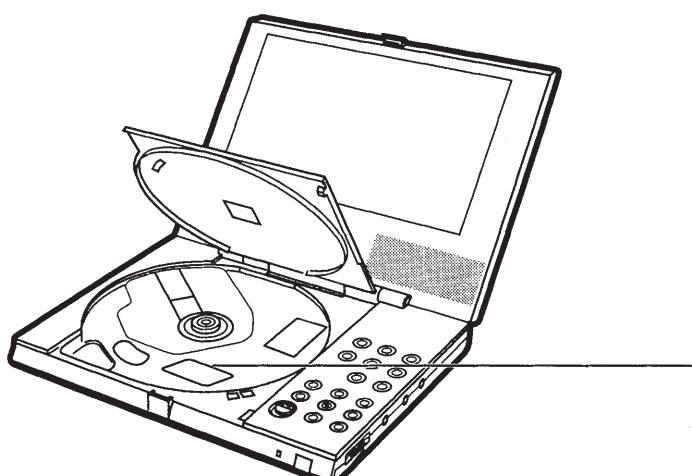
CAUTION:

THIS DVD VIDEO PLAYER IS A CLASS 1 LASER PRODUCT.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AS THE LASER BEAM USED IN THIS DVD VIDEO PLAYER IS HARMFUL TO THE EYES, DO NOT ATTEMPT TO DISASSEMBLE THE CABINET.

REFER SERVICING TO QUALIFIED PERSONNEL ONLY.



CAUTION
VISIBLE AND INVISIBLE LASER RADIATION
WHEN OPEN AND INTERLOCKS DEFEATED.
DO NOT STARE INTO BEAM OR VIEW
DIRECTLY WITH OPTICAL INSTRUMENT.

WARNING
DO NOT DEFEAT THESE INTERLOCKS.

**⚠ CAUTION
BEFORE BATTERY DESTROY**

■ NICKEL-CADMIUM BATTERY

The following program is available in the United States. Please consult local environmental authorities concerning the availability of this or other programs in your area.

The RBRC™ Seal

SHARP participates in the RBRC™* Nickel-Cadmium Battery Recycling Program in the United States. The RBRC™ Seal on our battery pack contained in our product indicates that SHARP is voluntarily participating in an industry program to collect and recycle these batteries. The RBRC™ program provides you with a convenient alternative to placing spent Nickel-Cadmium battery packs into the trash or municipal waste stream, which is illegal in some areas. At the end of their useful life, the Nickel-Cadmium battery can be dropped off at the nearest collection center for recycling. For information on the nearest collection center, call 1-800-8-BATTERY or your local recycling center. If you are located outside the United States, contact your local authorities for information concerning proper disposal and/or recycling of this battery. SHARP's involvement in this program is part of our commitment to protecting our environment and conserving natural resources.

[Footnote] *RBRC™ is a trademark of the Rechargeable Battery Recycling Corporation.

**■ NICKEL-METAL HYDRIDE BATTERY
■ LITHIUM or LITHIUM-ION BATTERY
■ SEALED LEAD BATTERY**

Battery disposal

Contains the above Rechargeable Battery. must be recycled or disposed of properly.

Remove the Battery from the products and contact Federal or State Environmental Agencies for information on recycling and disposal options.

2. FEATURES

7" LCD Screen and Stereo Speakers

- A big 7" LCD screen and built-in stereo speakers provide exciting DVD viewing, even without connecting to a TV.
- Dolby Virtual provides high-quality surround sound.

2-WAY Power Supply

- A 2-way power supply allows operation using the supplied AC adapter for indoor play, or the supplied battery pack for outdoor play.

Compact, Lightweight Design

- About the size of a movie DVD case, your DVD video player is designed to go along just about anywhere.

High-Resolution Images, High-Quality Sound

- A high-resolution 336,960-pixel LCD screen produces images of outstanding quality.
- Digital gamma correction and digital super picture provide more realistic image detail.
- Dolby Virtual ensures richer sound from two built-in speakers.

AV input/output, optical digital output jack equipped as standard

- An optical digital output jack (which doubles as the audio input/output jack) can be used to output a stream of *¹Dolby Digital 5.1 channel audio and *²DTS digital audio. Connecting a Dolby Digital/DTS digital surround processor or amplifier to this jack creates an environment of amazingly powerful surround sound.
- The AV input/output jack can be used to connect a video deck or camcorder to your DVD video player. Or you can use these jacks to connect to a TV for big-screen viewing. (Output only is supported for S-video. An S-video signal cannot be input to your DVD video player.)

*¹ Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

*² "DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc.

3. SPECIFICATIONS

Product: Portable DVD Video Player

Model: DV-L78U

Signal System: NTSC

Supported Disc Types: DVD (Region Number 1, ALL), Video CD, Audio CD

Video Input/Output: Input/Output Jack: Mini jack × 1 (accepts supplied S-video/video cord)

Input/Output Levels: 1Vp-p (75Ω)

S-Video Output: Y Output Level: 1Vp-p (75Ω)

C Output Level: 0.286Vp-p (75Ω)

Output Jack: Mini jack (shared with Video In/Out) × 1
(accepts supplied S-video/video cord)

Audio Input/Output: Input /Output Jack: Mini jack × 1 (accepts supplied audio cord)

Input/Output Levels: 2Vrms (1kHz, 0dB)

Digital Audio Interface: Optical digital output: Mini jack (shared with audio In/Out)

Audio Output: 0.8W + 0.8W

Headphones Output: Output Jack: Mini jack (stereo)

Display: Screen Size: 7 inches (87.8 (3¹⁵/₃₂) (H) × 155.5 (6¹/₈) (W) mm)

Type: Transmissive TN liquid crystal panel

Drive: TFT (thin transistor) active matrix

Pixels: 336,960 (234 (H) × 480 (W) × 3),

Effective Pixel Rate: 99.99% minimum

Speakers: Two 28mm round speakers

Light Source: Internal (fluorescent)

Video Signal: Horizontal Resolution: 500 lines

S/N Ratio: 60 dB minimum

Audio Signals: Frequency Characteristics:
 Linear PCM DVD: 4Hz to 22kHz (48kHz sampling)/
 4Hz to 44kHz (96kHz sampling)
 CD: 4Hz to 20kHz (EIAJ)
 S/N Ratio: CD: 96 dB 1kHz (EIAJ)
 Dynamic Range: Linear PCM DVD: 96dB (EIAJ)
 CD: 96dB (EIAJ)

Total Harmonic Distortion Ratio: 0.006% maximum (EIAJ)

Power Requirements: AC Adapter: 9V DC

Battery Pack: 7.4V DC

Power Consumption: Main Power On: 11W average (15.5W maximum)
 (AC Adapter) Standby: 0.5W (Power/standby lamp lit red)

Main Power Off: 0W

Dimensions: 188 (W) × 141 (D) × 25.4 (H) mm ($7\frac{13}{32}$ " × $5\frac{9}{16}$ " × 1")
 (except for projections)

Weight: 620g (1.37 lbs)

Operating Temperature: 5°C to 35°C (41°F to 95°F)

Operating Humidity: 80% RH maximum

Storage Temperature: -20°C to 40°C (-4°F to 104°F)

AC Adapter Specifications

Power Requirements: 110 to 240V AC, 50/60Hz

Rated Input Capacity: DVD Operation: 30VA
 Charging (100V): 30VA

Rated Output: DVD Operation: 9V DC
 Charging: 9V DC

Dimensions: 58 (W) × 104 (D) × 275 (H) mm
 ($2\frac{19}{64}$ " × $4\frac{7}{64}$ " × $10\frac{53}{64}$ ")

Weight: 170g (0.38 lbs)

Battery Pack Specifications

Type: Lithium-ion type

DC output: 7.4V

Capacity: 4200mAh

Operating temperature: 0°C to +40°C (32°F to 104°F) (charging: 10°C to 30°C (50°F to 86°F))

Max. Dimensions: 184 (W) × 134.5 (D) × 14.5 (H) mm

($7\frac{1}{4}$ " × $5\frac{19}{64}$ " × $\frac{37}{64}$ ") without protruding parts

Weight: 430g (0.95 lbs)

Specifications are subject to change without notice.

Weight and dimensions are approximate.

Digital Output (linear PCM)

- The digital output format used in this DVD video player is linear PCM audio sampling at 44.1 kHz or 48 kHz.

Linear PCM sound for DVD video discs sampled at 96 kHz cannot be output digitally.

Check the disc jacket for information on the audio sampling used.

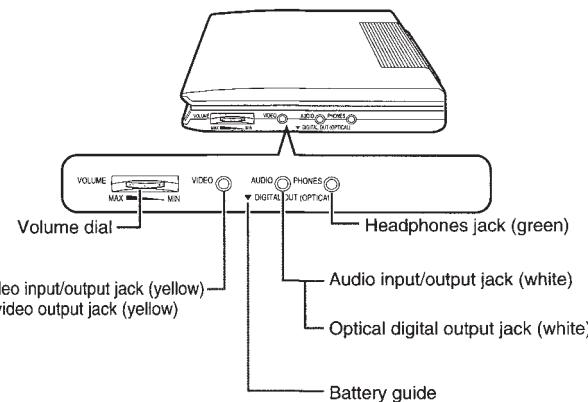
3-1. ACCESSORIES

Accessories: Audio Cord x 1, S-Video/Video cord x 1, AC Power Cord x 1, UM/SUM-3 battery x 2,

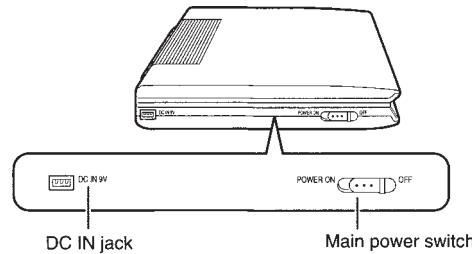
Remote Control Unit x 1, Lithium-ion Battery Pack x 1, AC Adapter x 1, Operation Manual x 1

4. PART NAMES

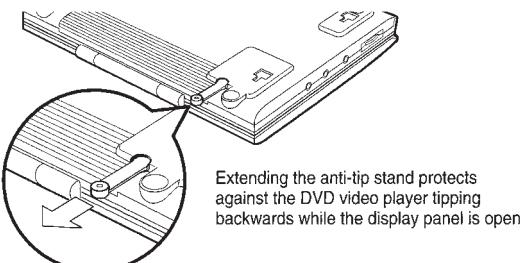
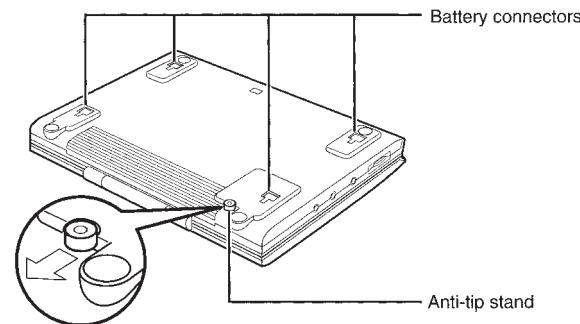
DVD Video Player - Right side



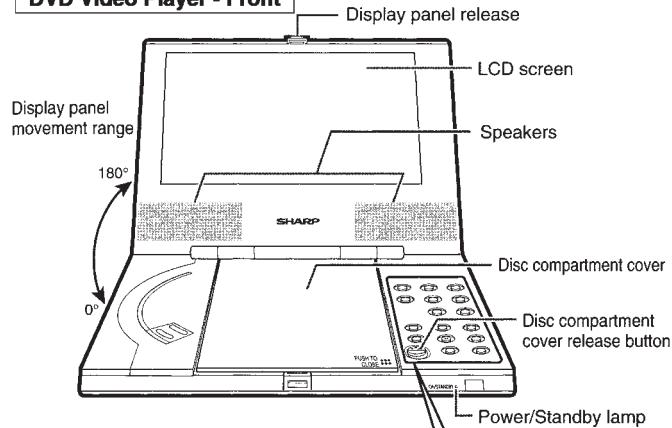
DVD Video Player - Left side



DVD Video Player - Bottom

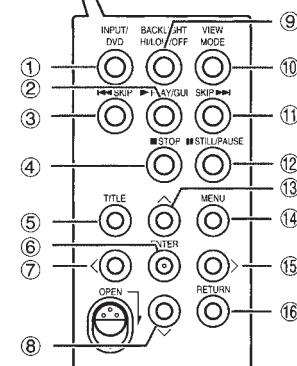


DVD Video Player - Front



- ① INPUT/DVD
- ② PLAY (▶)/GUI button
- ③ SKIP (◀) button
- ④ STOP (■) button
- ⑤ TITLE button
- ⑥ ENTER button
- ⑦ ▲
- ⑧ ▼
- ⑨ BACKLIGHT HI/LOW/OFF button
- ⑩ VIEW MODE button
- ⑪ SKIP (▶▶) button
- ⑫ STILL/PAUSE (■■) button
- ⑬ ▲
- ⑭ MENU
- ⑮ ▶
- ⑯ RETURN button*

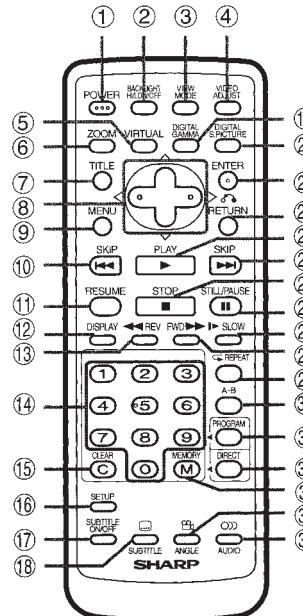
* When in the Standby mode, pressing this button restores full power.



Important!

- The range of movement for the display panel is 0° to 180°. Never try to force the display panel open past 180°. Doing so can seriously damage the display panel and DVD video player.

Remote Control Unit



- ① POWER button
- ② BACKLIGHT HI/LOW/OFF button
- ③ VIEW MODE button
- ④ VIDEO ADJUST button
- ⑤ VIRTUAL button
- ⑥ ZOOM button
- ⑦ TITLE button
- ⑧ Cursor buttons (▲▼◀▶)
- ⑨ MENU button
- ⑩ SKIP (◀) button
- ⑪ RESUME button
- ⑫ DISPLAY button
- ⑬ REV (◀) button
- ⑭ Number buttons
- ⑮ C (CLEAR) button
- ⑯ SETUP button
- ⑰ SUBTITLE ON/OFF button
- ⑱ SUBTITLE button
- ⑲ DIGITAL GAMMA button
- ⑳ DIGITAL S.PICTURE button
- ㉑ ENTER button
- ㉒ RETURN button
- ㉓ PLAY (▶) button
- ㉔ SKIP (▶▶) button
- ㉕ STOP (■) button
- ㉖ STILL/PAUSE (■■) button
- ㉗ SLOW (▶▶) button
- ㉘ FWD (▶▶) button
- ㉙ REPEAT button
- ㉚ A-B button
- ㉛ PROGRAM button
- ㉜ DIRECT button
- ㉝ M (MEMORY) button
- ㉞ ANGLE button
- ㉟ AUDIO button

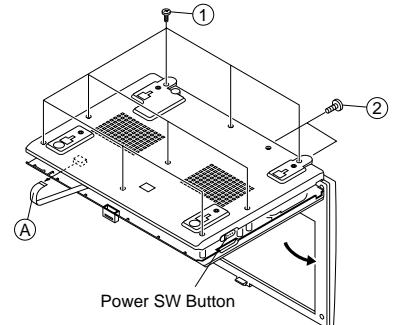
5. DISASSEMBLY METHOD

5-1. DISASSEMBLY METHOD

1. Remove the nine screws ①.
2. Loosen the two screws ②.
3. After opening the LCD unit, remove the hinge claw of cabinet A to detach it from cabinet B.

Note: The power SW button is also removed. Be careful not to forget it when assembling the unit.

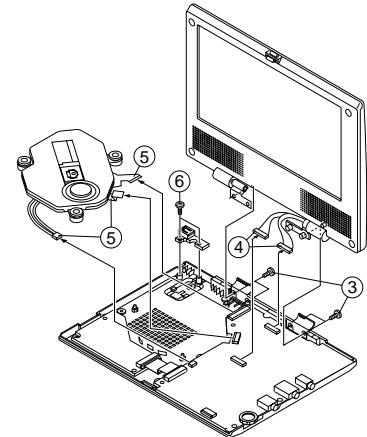
4. Remove the FFC Ⓐ from the main PWB.



5. Remove the screws ③.

Note: Check the screws before assembling because they are different depending on the right and left hinges.

6. Remove the connectors ④ from the main PWB.
7. Remove the pickup FPC/sled lead connectors ⑤.
8. Remove the screws ⑥ fixing the DC jack PWB.



9. Remove the four LCD rubber caps ⑦.

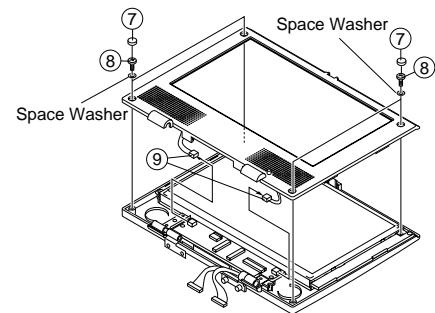
10. Remove the four screws ⑧.

Note: Be careful not to forget to put space washers when assembling because they are tightened with the above screws.

11. Remove the cabinet D. At this time, remove engagement claws (two on the upper LCD panel, two on the right and left sides, two on the lower LCD panel).

Note: Do not break the claws on the right and left sides by opening cabinet C a little.

12. Remove the right and left speaker connectors ⑨.



13. Remove the screw ⑩.

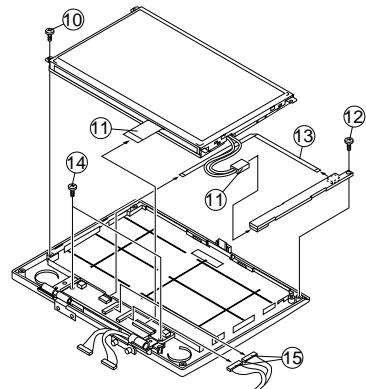
14. Remove the FPC ⑪ from the connector.

15. Remove the screw ⑫.

16. Remove the FPC ⑬ from the connector.

17. Remove the screws ⑭.

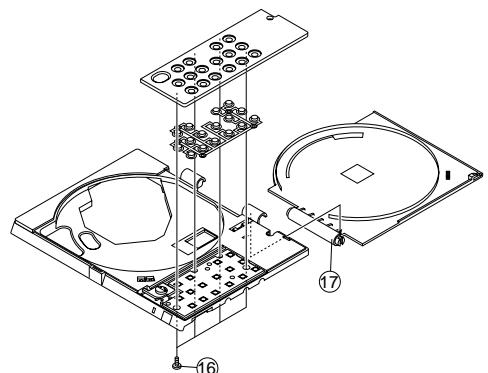
18. Remove the connectors ⑮.



19. Remove the four screws ⑯.

20. Remove the three claws on the control panel (front: 2 pcs., rear: 1 pc.).

21. Open the disc cover ⑰ 180° to remove it from cabinet A.

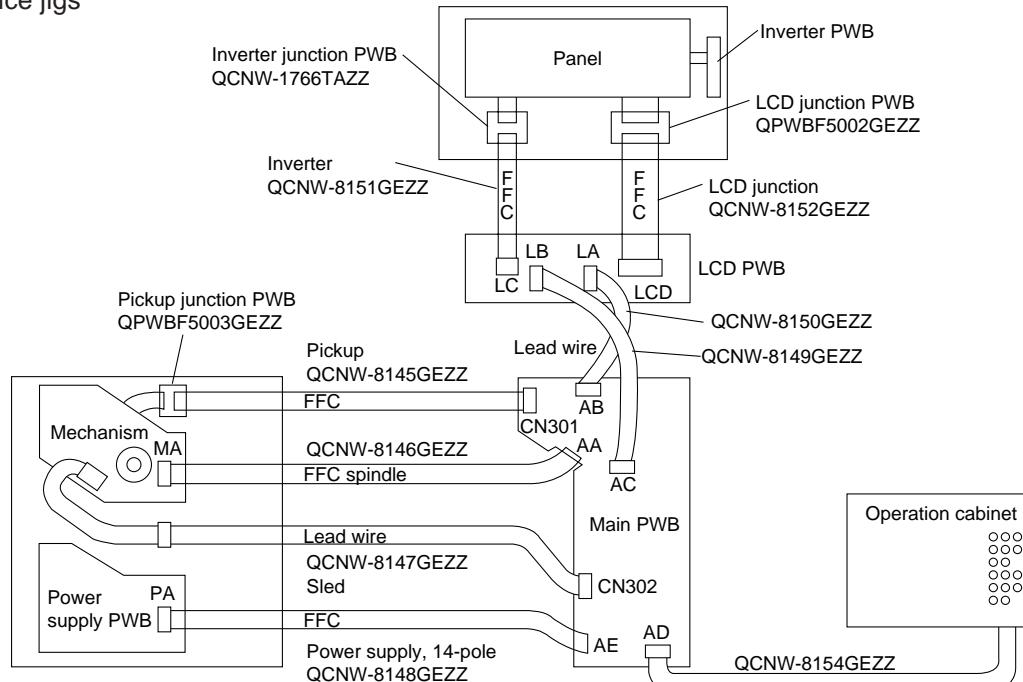


6. ADJUSTMENT METHOD

6-1. HARNESS LIST FOR SERVICE PARTS

Parts Code	Price Code	Remarks	Parts Code	Price Code	Remarks
QCNW-8145GEZZ	AQ	P.U. extension, 30-pin	QCNW-8151GEZZ	AQ	Inverter extension, 6-pin
QCNW-8146GEZZ	AQ	Spindle extension, 13-pin	QCNW-8152GEZZ	AQ	LCD panel extension, 32-pin
QCNW-8147GEZZ	AN	Sled extension, 2-pin	QCNW-8154GEZZ	AQ	Operation PWB extension, 12-pin
QCNW-8148GEZZ	AM	Power supply extension, 14-pin	QCNW-1766TAZZ	BF	Inverter junction PWB
QCNW-8149GEZZ	AQ	Main LCD extension, 14-pin	QPWBF5002GEZZ	BF	LCD junction PWB
QCNW-8150GEZZ	AQ	Main LCD extension, 14-pin	QPWBF5003GEZZ	BF	Pickup junction PWB

Drawing for service jigs

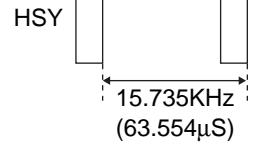


6-2. ADJUSTMENT PROCEDURE AND METHOD OF LCD PWB SIDE

1. 7.5V adjustment

Adjustment VR	R1102
Adjustment Point	Put a voltmeter between 6PIN (+7.5V) and 4PIN (GND) of TP1191.
Input Signal/Setting	No input
Adjustment Method	Adjust it to $7.50 \pm 0.02V$.

2. Free run adjustment

Adjustment VR	R1104
Adjustment Point	Observe the 3PIN of TP1191 with a frequency counter.
Input Signal/Setting	No input, external input mode
Adjustment Method	Adjust it so as to get the HSY frequency of $15.735 \pm 0.01\text{KHz}$ ($63.554\mu\text{s}$). 

3. Screen center adjustment

Adjustment VR	R1103
Adjustment Point	Visual observation of the panel
Input Signal/Setting	Monoscope full screen
Adjustment Method	Adjust the screen so that it is located in the center.

6-3. CHECK ITEMS OF LCD PWB SIDE

1. Power supply voltage check

Adjustment Point	Put voltmeters in 4PIN (GND), 5PIN (-16V) and 7PIN (13V) of TP1191.
Input Signal/Setting	Check in the DVD mode.
Adjustment Method	Check that each voltage indicates $-16 \pm 1V$ and $13 \pm 0.5V$ respectively.

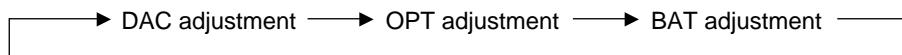
2. Free run check

Adjustment Point	Check the panel visually by connecting to the checker.
Input Signal/Setting	External input
Adjustment Method	Check that the horizontal movement of ODS is 1 mm or less when inputting a signal in the external input mode with no signal input. 

6-4. ADJUSTMENT PROCEDURE AND METHOD OF MAIN PWB SIDE

1. Press the UP+DOWN key is pushed at the same time, and made power source on.
2. It moves to the special mode(SP MODE), and a BACKLIGHT(HI/LOW/OFF) key is pushed and turned off.
3. After setting is completed, a power source is turned off.
4. Again, a UP+DOWN key is pushed at the same time, and a power source is turned on and made special mode.
5. An INPUT/ DVD key is pushed, and it becomes adjustment mode.
6. Each operation in the adjustment mode changes as follows:

- (1) Switch the adjustment block with the TILT key input.



- (2) Perform paging of each adjustment block with the RETURN key.



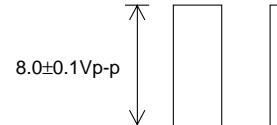
- (3) Switch each adjustment item with the menu key input.



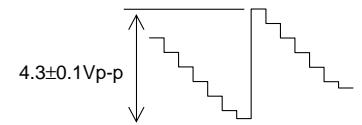
- (4) Change each adjustment value with the left or right cursor key.

1. DAC adjustment**(1) TV1 adjustment**

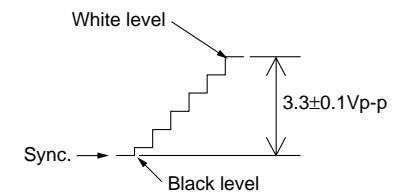
Adjustment VR	GAM0
	Initial value "44" adjustment is unnecessary.
Adjustment VR	SBRI
Adjustment Point	_____
Input Signal/Setting	It is set in "56".
Adjustment VR	GPOS
Adjustment Point	Connect the oscilloscope to COM output (6PIN of TP1901) and GND.
Input Signal/Setting	Black-and-white 10STEP
Adjustment Method	Adjust the common amplitude to $8.0 \pm 0.1 \text{Vp-p}$.



Adjustment VR	GAM2
Adjustment Point	Connect the oscilloscope to 3PIN (VG) and GND of TP1901.
Input Signal/Setting	Black-and-white 10STEP
Adjustment Method	Adjust the Vpp of VG to $4.3 \pm 0.1 \text{Vp-p}$.



Adjustment VR	CONT
Adjustment Point	Connect the oscilloscope to 3PIN (VG) and GND of TP1901.
Input Signal/Setting	Black-and-white 10STEP
Adjustment Method	Adjust the Vpp of VG to 3.3Vp-p .

**(2) TV2 adjustment**

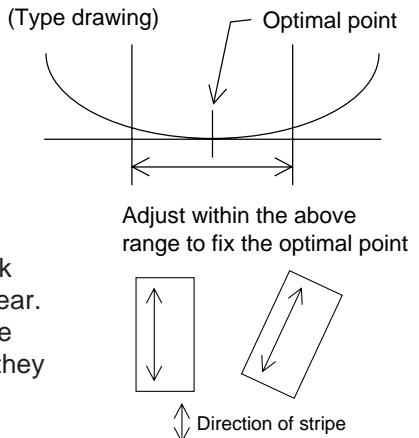
Adjustment VR	WB-R
Adjustment Point	Connect the oscilloscope to 3PIN (VG) and 4PIN (VR) of TP1901.
Input Signal/Setting	Black-and-white 10STEP
Adjustment Method	Adjust the white balance (red) so that peak-peak the equal of green and red output become equal.

Adjustment VR	WB-B
Adjustment Point	Dual the oscilloscope to 3PIN (VG) and 5PIN (VB) and GND of TP1901.
Input Signal/Setting	Black-and-white 10STEP
Adjustment Method	Adjust the white balance (blue) so that peak-peak the equal of green and blue output become equal.

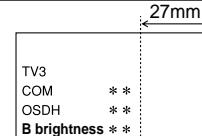
Adjustment VR	SCOL
Adjustment Point	Connect the oscilloscope to 5PIN (VB) and GND of TP1901.
Input Signal/Setting	100% color bar
Adjustment Method	Adjust the blue amplitude of the color bar (black level to peak level) to $3.8 \pm 0.1 \text{Vpp}$.

Adjustment VR	STIN
Adjustment Point	Connect the oscilloscope to 5PIN (VB) and GND of TP1901.
Input Signal/Setting	100% color bar
Adjustment Method	Blue of the color bar and the crest value of magenta are made to become equal.

(3) TV3 adjustment

Adjustment VR	COM
Adjustment Point	Specified adjustment jig (illuminometer) or visual observation
Input Signal/Setting	No input state Brightness: Center Perform it in a combination of PWB and the liquid crystal panel which will be supplied as products finally.
Adjustment Method	<ul style="list-style-type: none"> When using the specified adjustment jig Connect the output of jig to the oscilloscope and adjust the waveform to the minimum point. At this time, perform the adjustment several times to fix the optimal point because the measuring value hardly changes around the optimal point. In case of visual adjustment Stand or tilt the panel as shown in the figure and check by shaking your head and seeing whether stripes appear. If the adjustment is improper, you will see stripes in the longitudinal direction. Perform the adjustment so that they do not appear. 

Adjustment VR	OSDH
Adjustment Point	Visual observation
Adjustment method	Adjust the OSDH of TV3 to 27 mm from the right of screen.



Adjustment VR	B BRI
Adjustment method	Set the B brightness to "76".

2. OPT adjustment

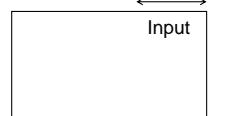
Adjustment VR	OPT adjustment
Initialization	It is set respectively in WIDE "03", OSDV"00", BL"01".

3. BAR adjustment

Adjustment VR	BAT adjustment
Initialization	Stabilized power supply, in the body, connection. It is made DVD start rise state, and a BACKLIGHT(HI/LOW/OFF) key is pushed and made "HI". The voltage of the stabilized power supply is adjusted to become $6.4 \pm 0.05V$ in the stabilized power supply connection part.
Adjustment Method	It is set so that the numerical value of the BAT display may become "00"

6-5. CHECK AND READJUSTMENT

1. Free run check

Adjustment VR	R1104
Adjustment Point	Visual observation
Input Signal/Setting	External input
Check and Readjustment	<p>Check that the horizontal movement of OSD position is 1 mm or less when inputting a signal in the external input mode with no signal input. If it is more than 1 mm, adjust it so as to get 1 mm or less.</p> 

2. Screen position check

Adjustment VR	R1103
Adjustment Point	Visual observation of panel
Input Signal/Setting	Monoscope full screen
Check and Readjustment	Check whether the screen is located in the center. If it is not located in the center, adjust it to the center.

3. Luminance/gradation check

Adjustment VR	GPOS
Adjustment Point	Comparison with the standard set
Input Signal/Setting	10STEP signal
Check and Readjustment	Check whether the luminance and gradation of 10STEP signal are not different in comparison with the standard set. If they are different, adjust them so as to get equal to the standard set.

4. Depth check

Adjustment VR	S depth
Adjustment Point	Comparison with the standard set
Check and Readjustment	Check whether the depth of color is not different in comparison with the standard set. If it is different, adjust it so as to get equal to the standard set.

5. Tint check

Adjustment VR	S tint
Adjustment Point	Comparison with the standard set
Check and Readjustment	Check whether the tone is not different in comparison with the standard set. If it is different, adjust it so as to get equal to the standard set.

7. TEST MODE

When a power source is put with pushing a key.

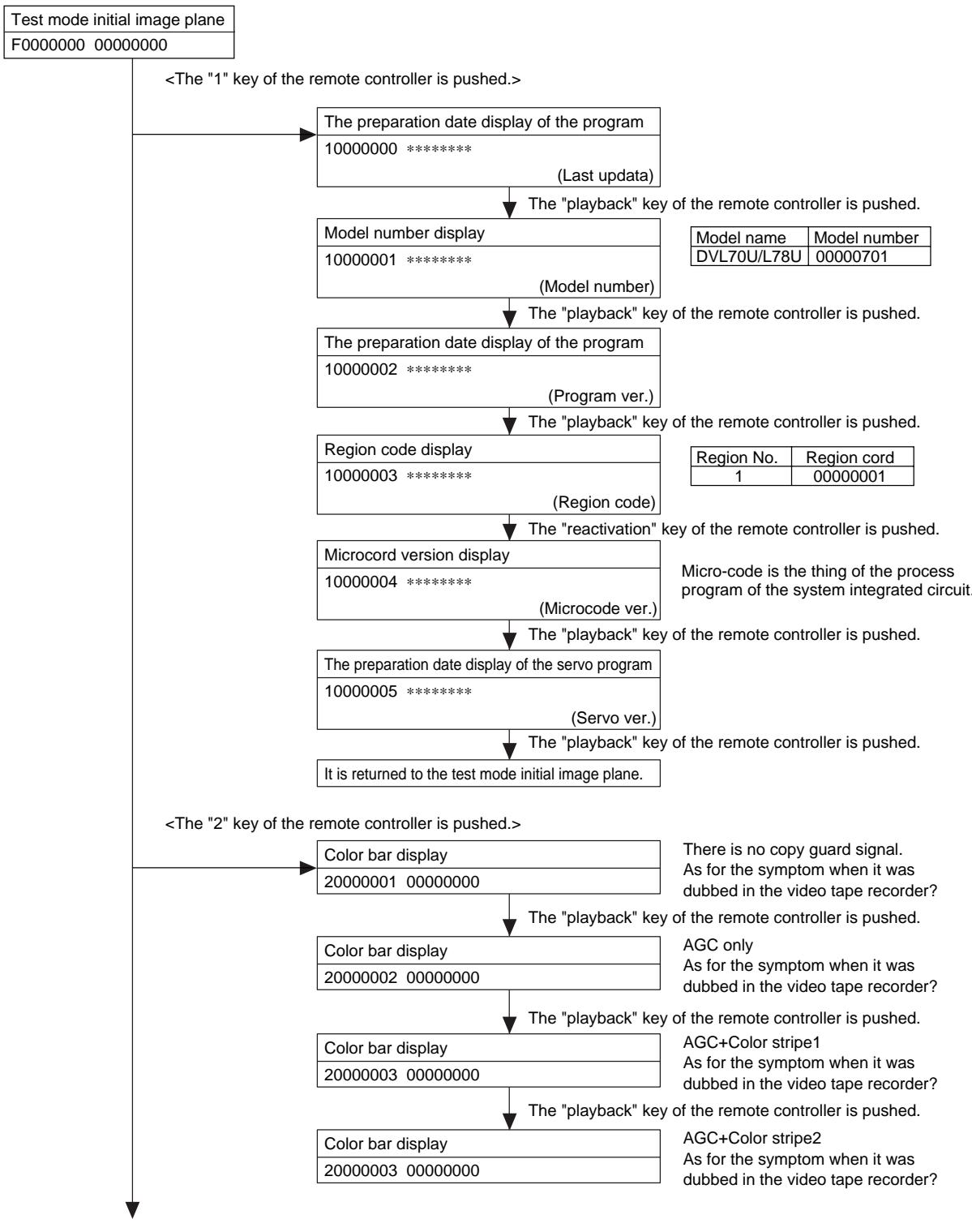
Adjustment Mode	A power source is put with pushing \wedge and \vee .
ROM renewal mode	It is put with pushing a playback key and a still key.

A power source is put.

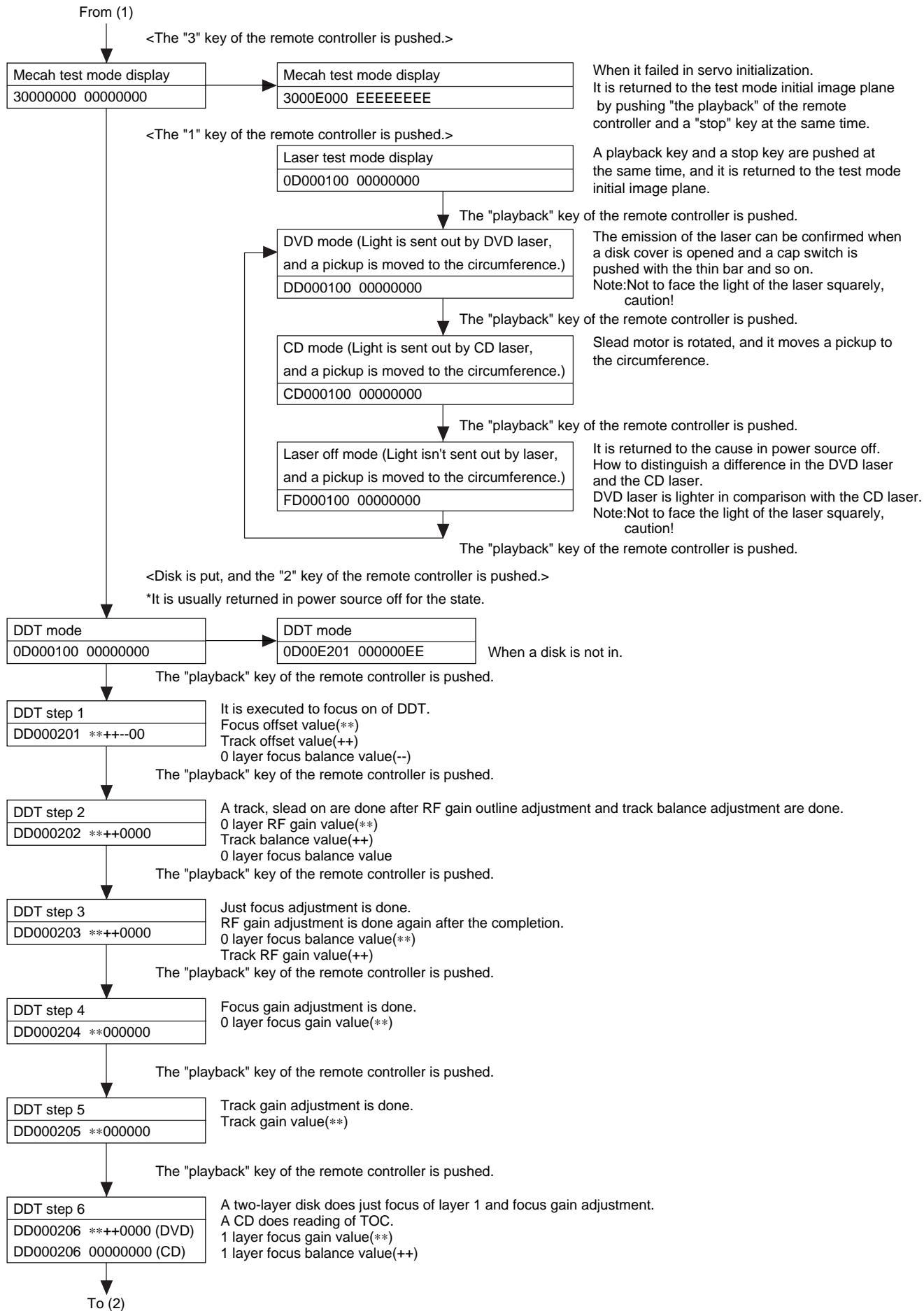
When there is a disc	Error rate display mode (There are a DVD and CD mode of it, and a disc is put, and a key manipulates.)
When there is	Test mode (Version display mode, color bar pattern display mode, mecha test mode.)

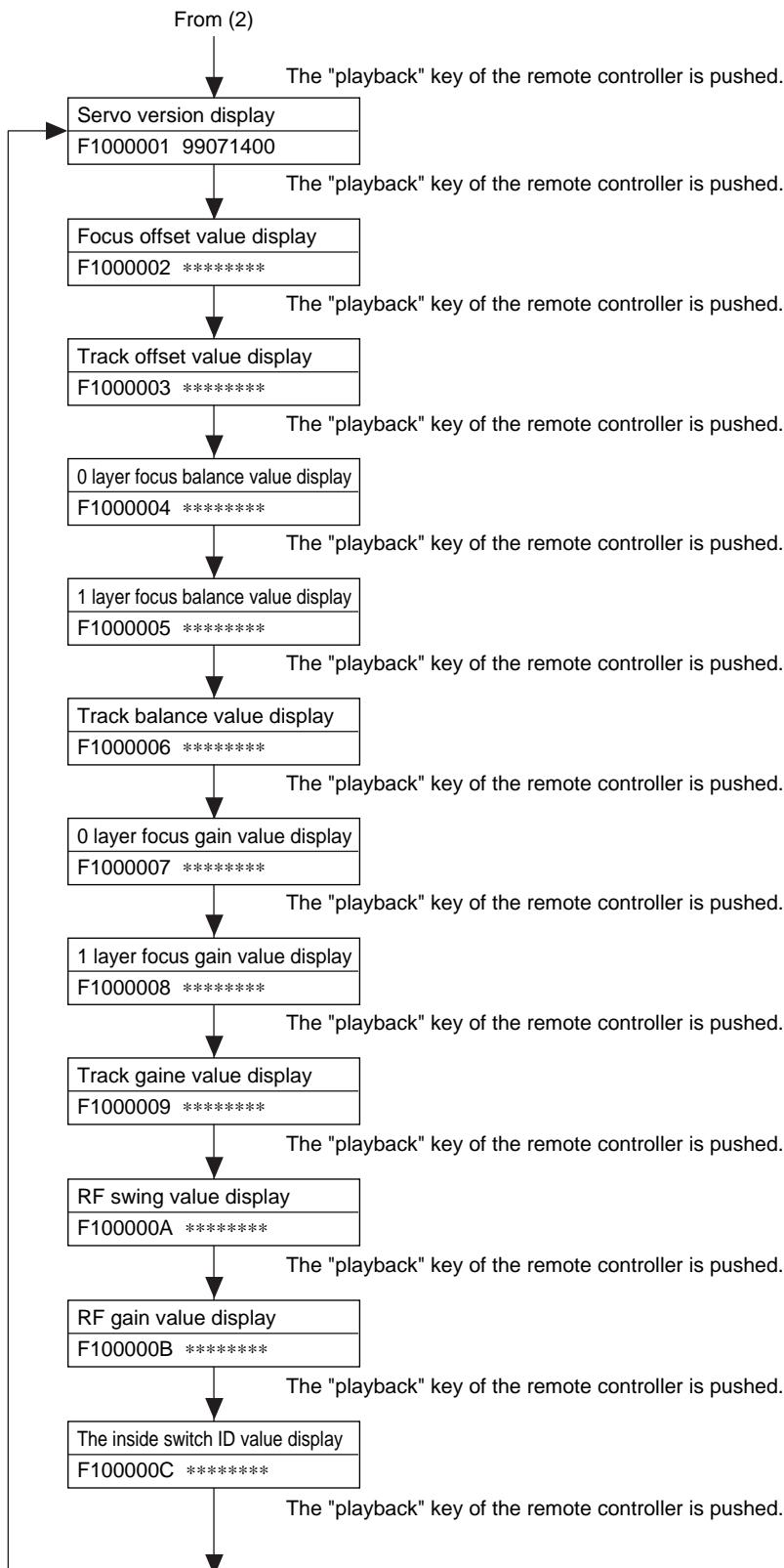
[The flow of the test mode]

A power source is put, and closing, a playback key and a stop key are pushed for about two seconds at the same time without a disk the disk cover. It goes into the (test mode).



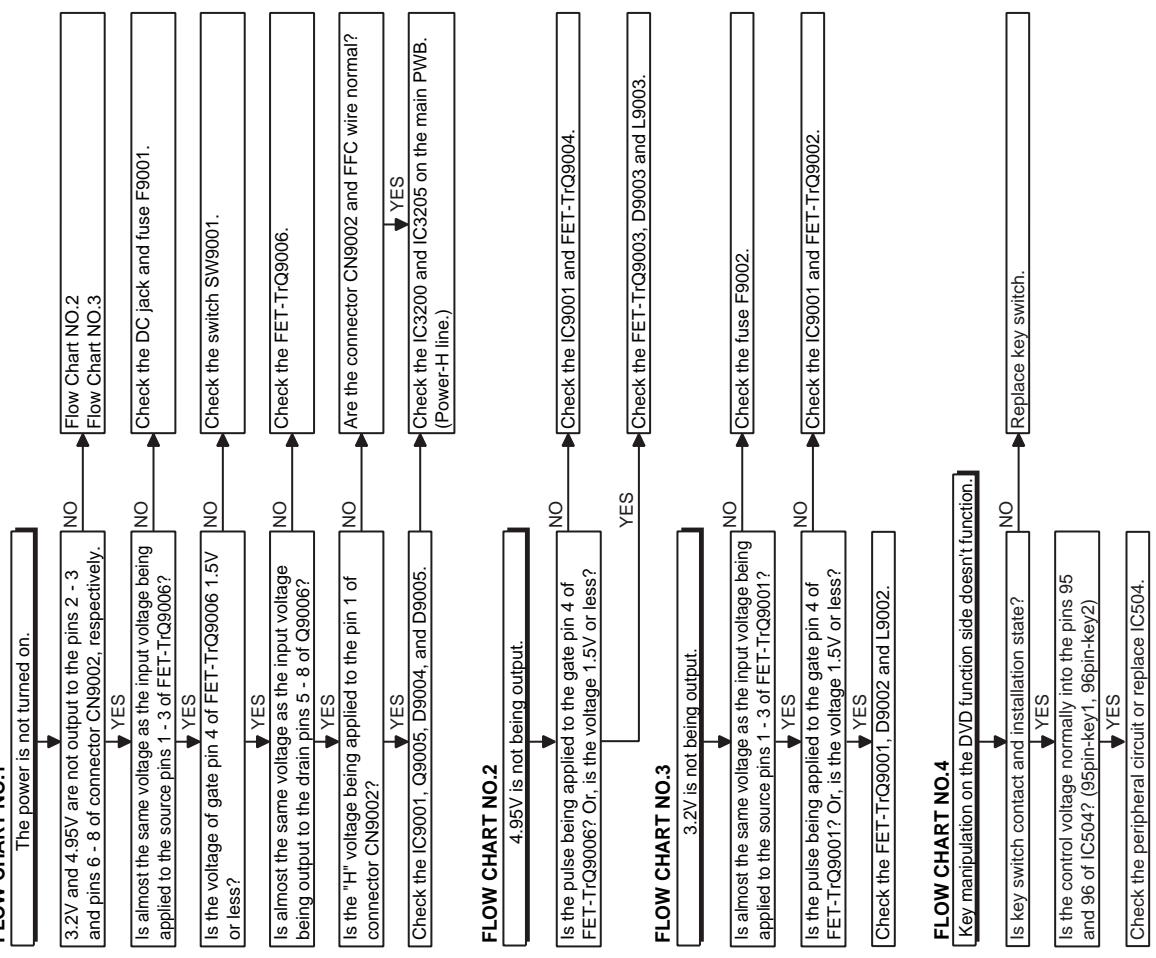
To (1)



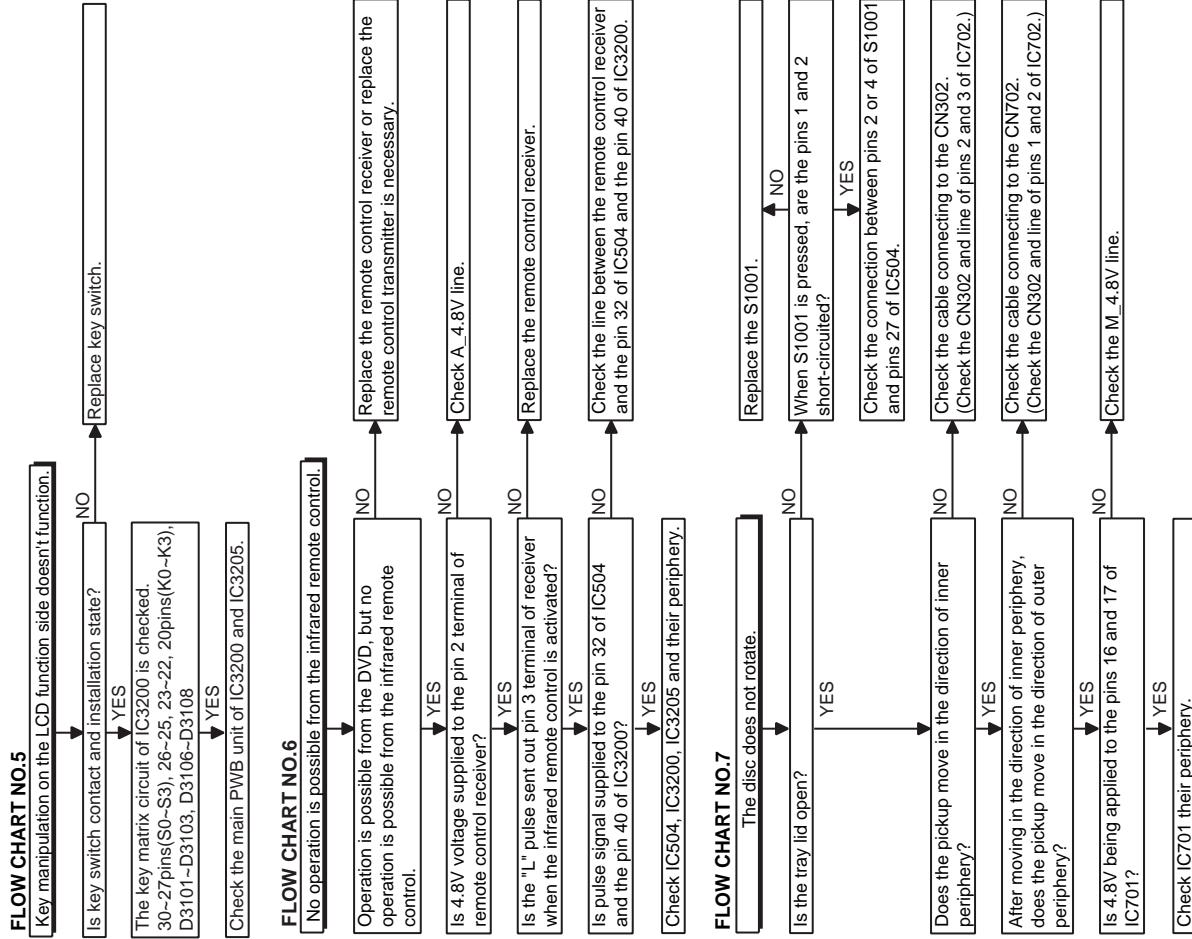


8. TROUBLESHOOTING

FLOW CHART NO.1

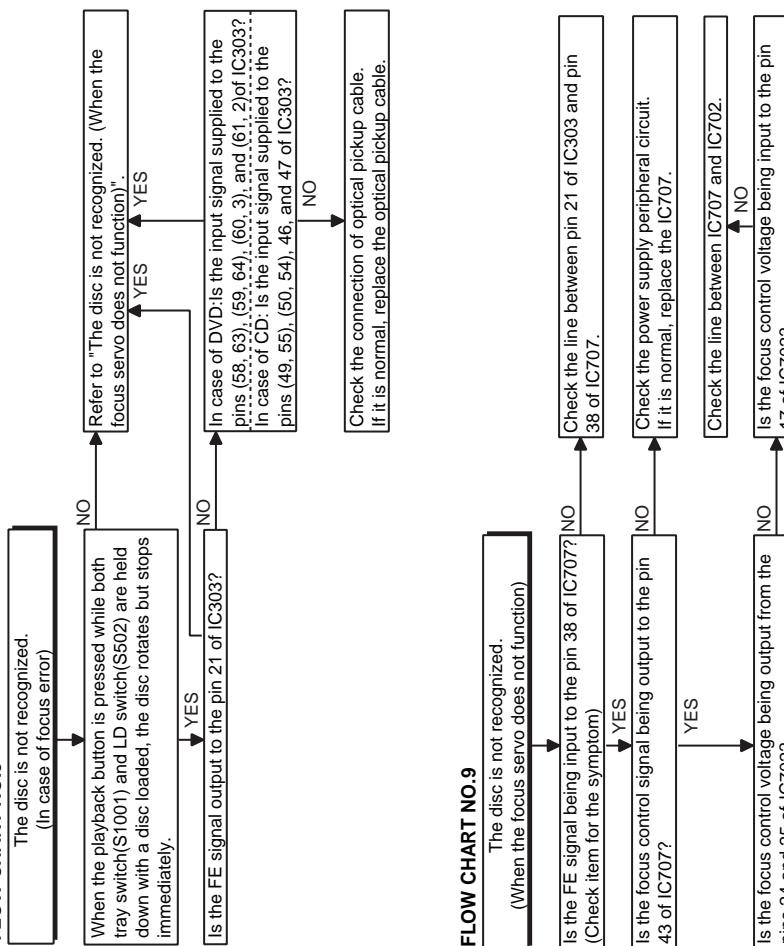
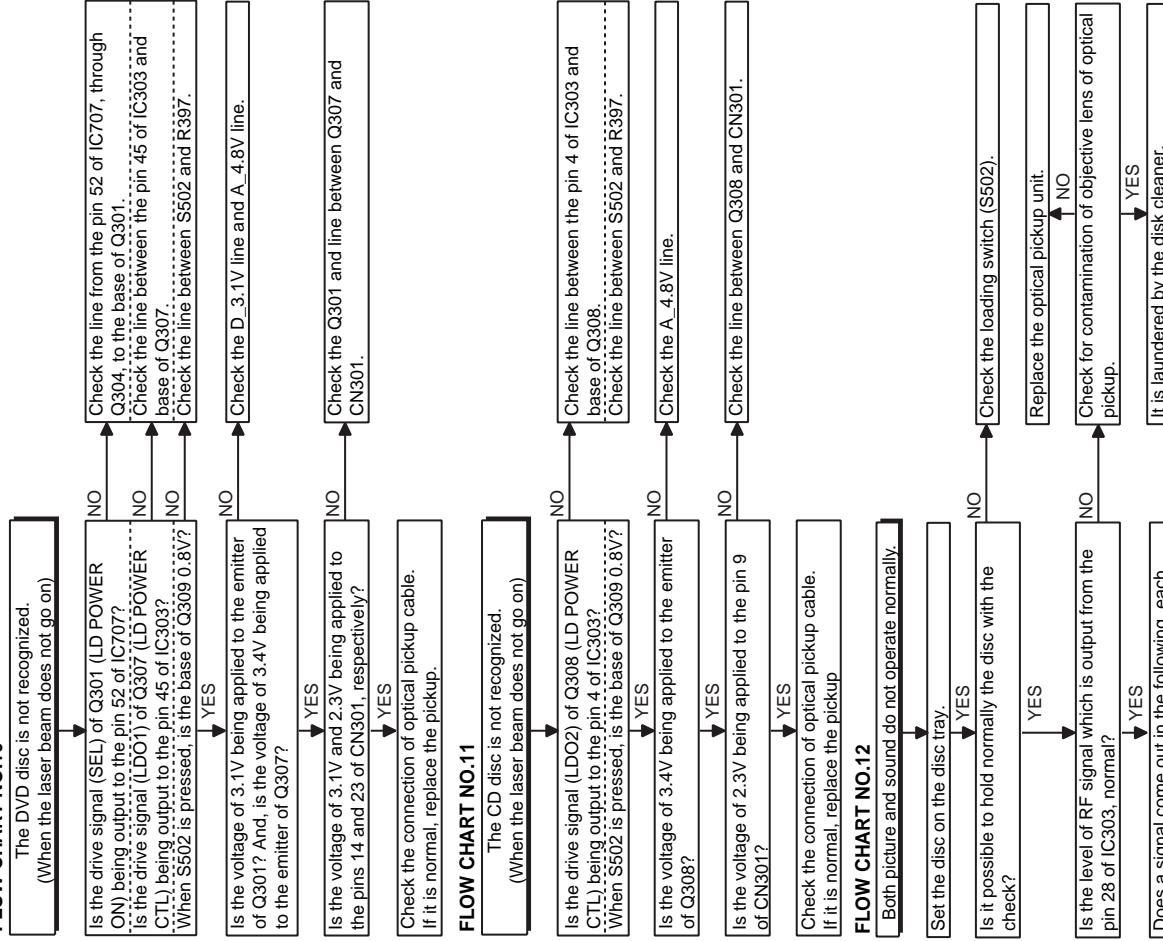


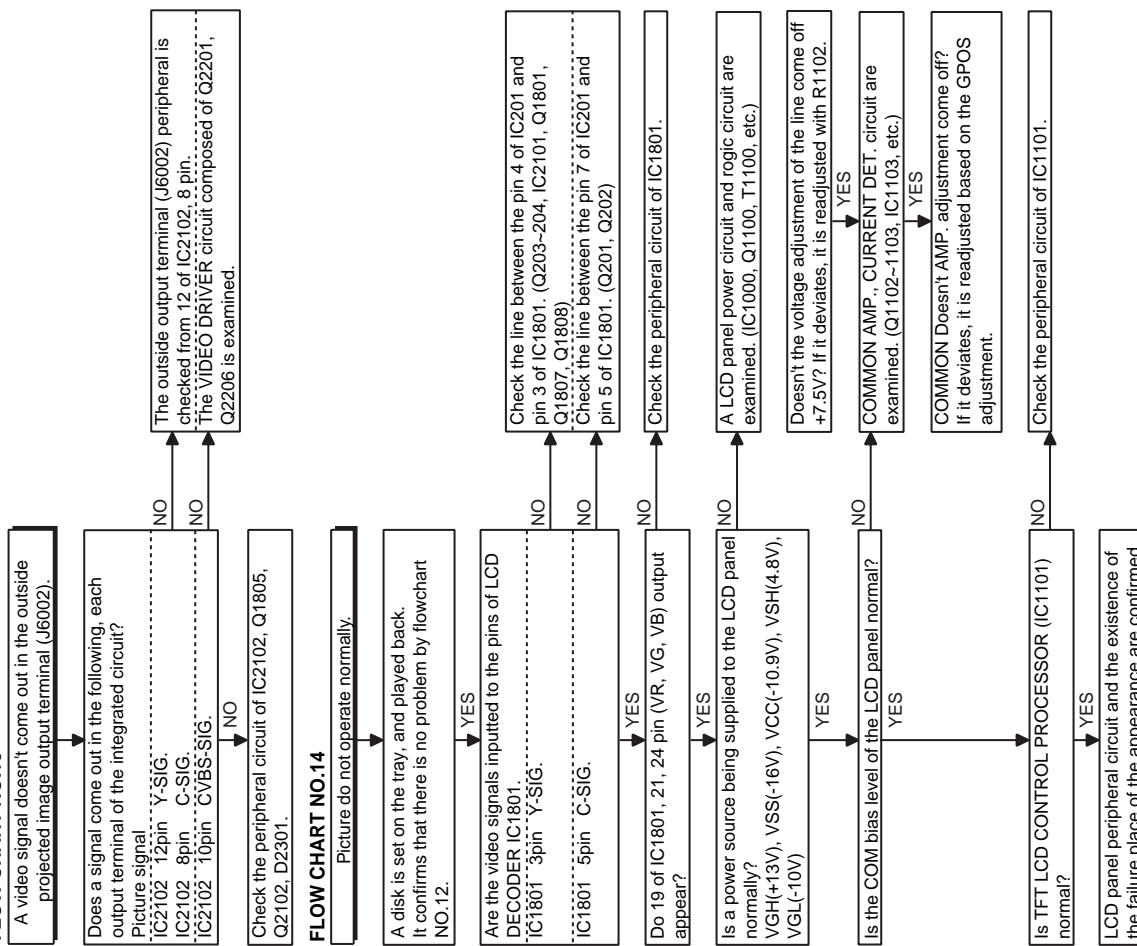
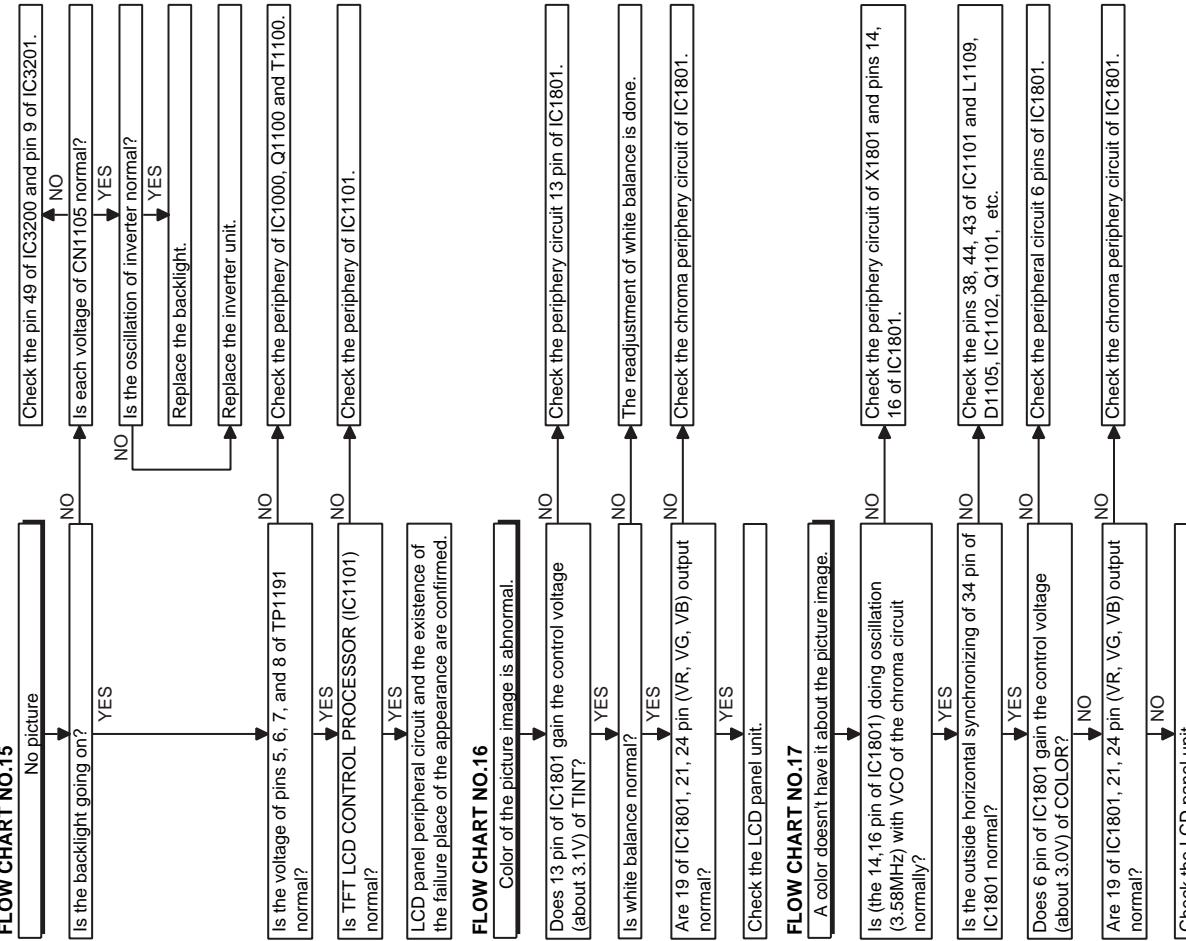
FLOW CHART NO.5

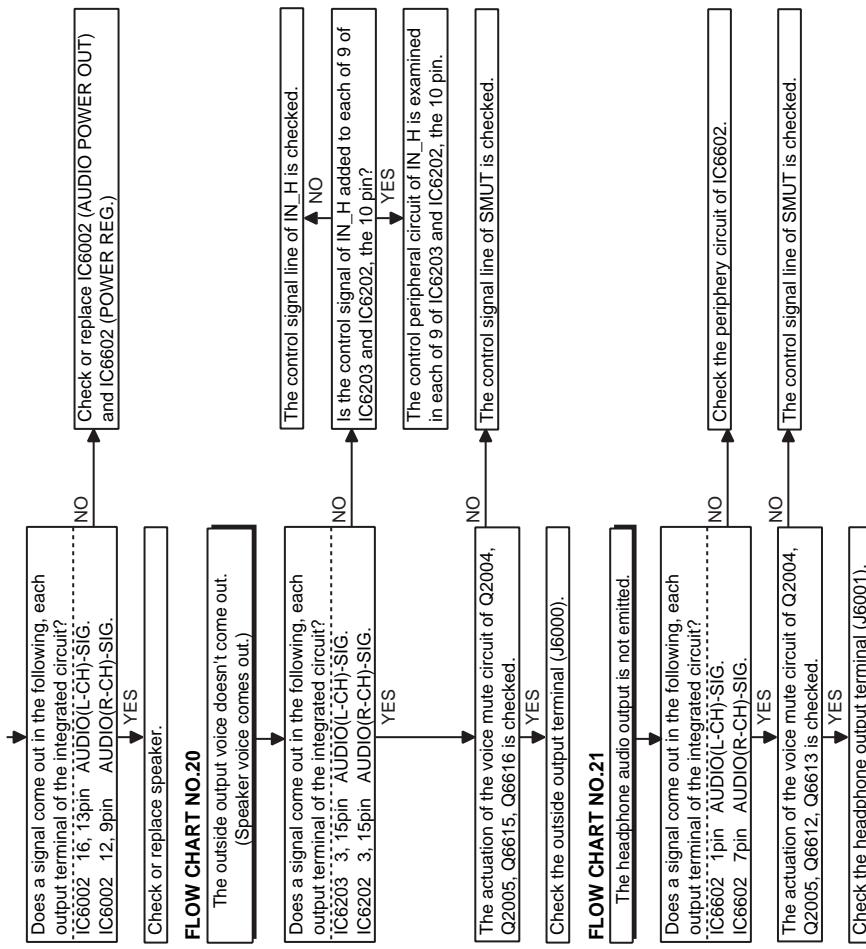
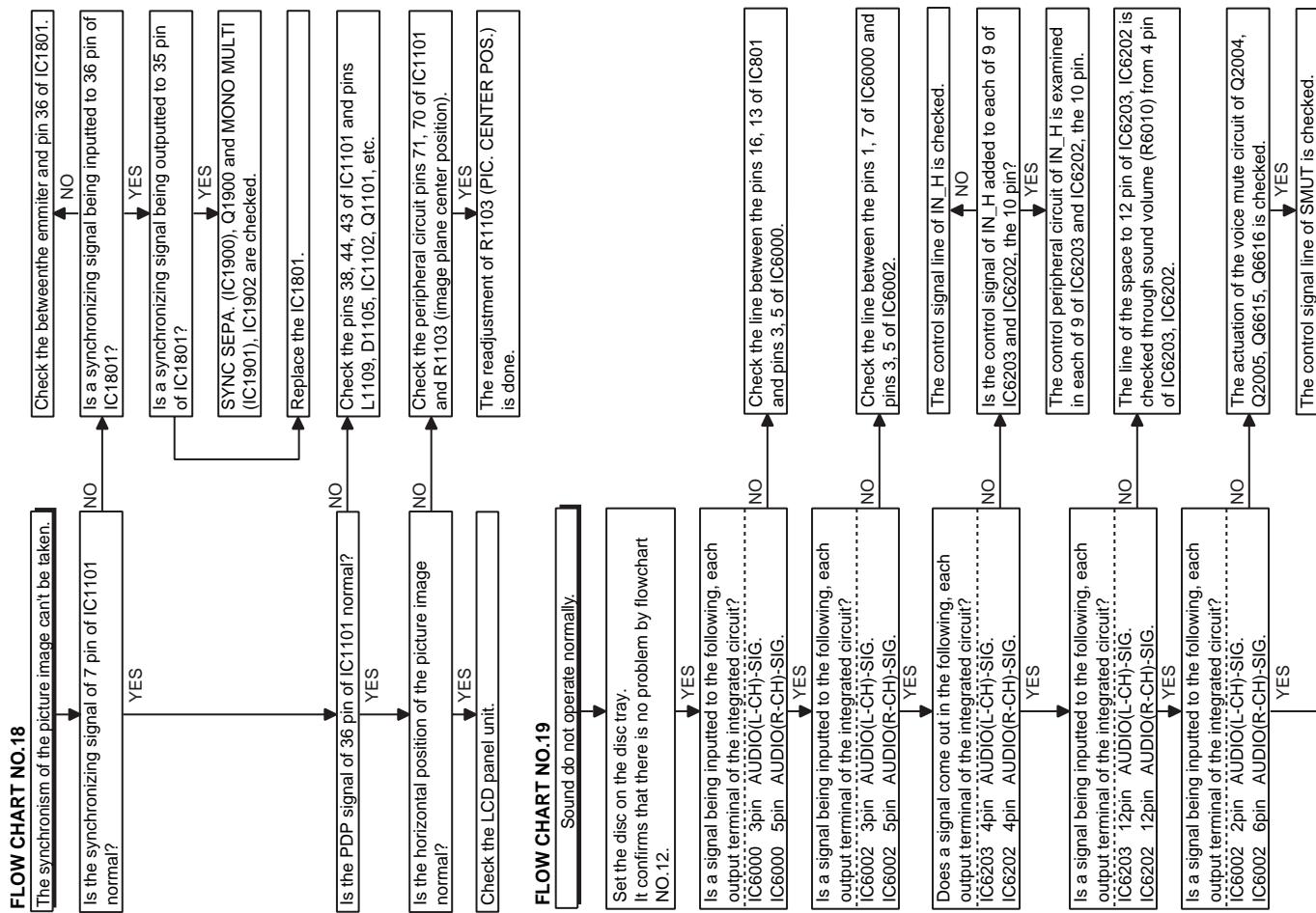


FLOW CHART NO.1



FLOW CHART NO.8**FLOW CHART NO.10**

FLOW CHART NO.13**FLOW CHART NO.15**

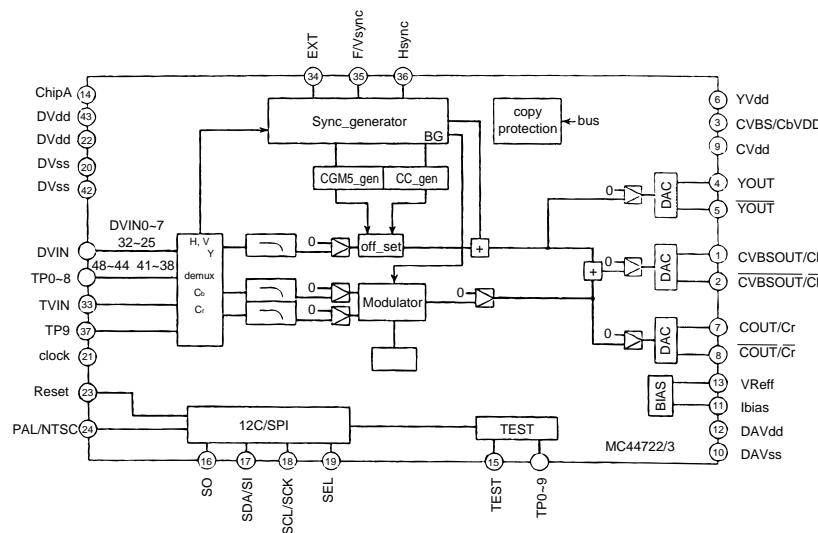


9. IC FUNCTION LIST

9-1. IC201 MC44722A DIGITAL VIDEO ENCODER

Pin No.	Terminal name	I/O	Operation function
1	CVBS/Cb	O	Analog composite video signal output or Cb signal output current drive (positive)
2	CVBS/Cb	O	Analog composite video signal output or Cb signal output current drive (negative)
3	CVBS/Cb Vdd		Power Supply for CVBS / Cb DAC circuit
4	Y	O	Analog luminance signal output current drive (positive)
5	Y	O	Analog luminance signal output current drive (negative)
6	YVdd		Power Supply for Y DAC circuit
7	C/Cr	O	Analog chrominance signal output or Cr signal output current drive (positive)
8	C/Cr	O	Analog chrominance signal output or Cr signal output current drive (negative)
9	CVdd		Power Supply for C/Cr DAC circuit
10	DA Vss		Ground for DAC circuit
11	Ibias	O	Reference current for the 3 DACs
12	DA Vdd		Power Supply for DAC circuit
13	VRef		Reference full scale voltage for the 3 DACs
14	ChipA		I2C chip address select {0 : 42(hex)/43(hex) 1 : 1C(hex)/1D(hex)}
15	TEST	I	TEST pin (Ground)
16	SO	z(O)	If SPI mode, serial data output / If I2C mode, connect to ground
17	SDA/SI	I/O(I)	Serial data input, Open drain output / If SPI mode, serial data input
18	SCL/SCK	I	Serial clock
19	SEL	(I)	Connect to Ground / If SPI mode, this pin is chip select
20	DVss		Ground for Digital circuit
21	CLOCK	I	27MHz clock input
22	DVdd		Power Supply for Digital circuit
23	Reset	I	Reset signal, active LOW
24	PAL/NTSC	I	NTSC/PAL select. This pin active only Reset time.(NTSC : Low PAL : High)
25-32	DVIN7-0	I	8-bit Multiplexed Y/Cr/Cb 4:2:2 data (ITU Rec656) input (1) or Multiplexed Y data (ITU-Rec656/601) input in 16-bit input mode (DVIN7 : MSB)
33	TVIN	I	TEST data input
34	EXT	I/O	Csync/Frame sync output or external VBI information input
35	F/Vsync	I/O	Frame sync or Vertical sync input/output
36	Hsync	I/O	Horizontal sync input/output
37	TP9	I/O	MUX switch in 8-bit X 2 Multiplexed Y/Cr/Cb 4:2:2 data (ITU-Rec656) input mode, or Test data input/output
38-41	TP8-5	I/O	8-bit Multiplexed 4:2:2 data (ITU-Rec656/601) input (2), or Multiplexed Cr/Cb data (ITU-Rec656/601) input in 16-bit input mode (MSB : TP8), or Test data input/output
42	DVss		Ground for Digital circuit
43	DVdd		Power Supply for Digital circuit
44-47	TP4-1	I/O	8-bit Multiplexed 4:2:2 data (ITU-Rec656/601) input (2), or Multiplexed Cr/Cb data (ITU-Rec656/601) input in 16-bit input mode (LSB : TP1), or Test data input/output
48	TP0	I/O	For test (should be ground)

• Block Diagram

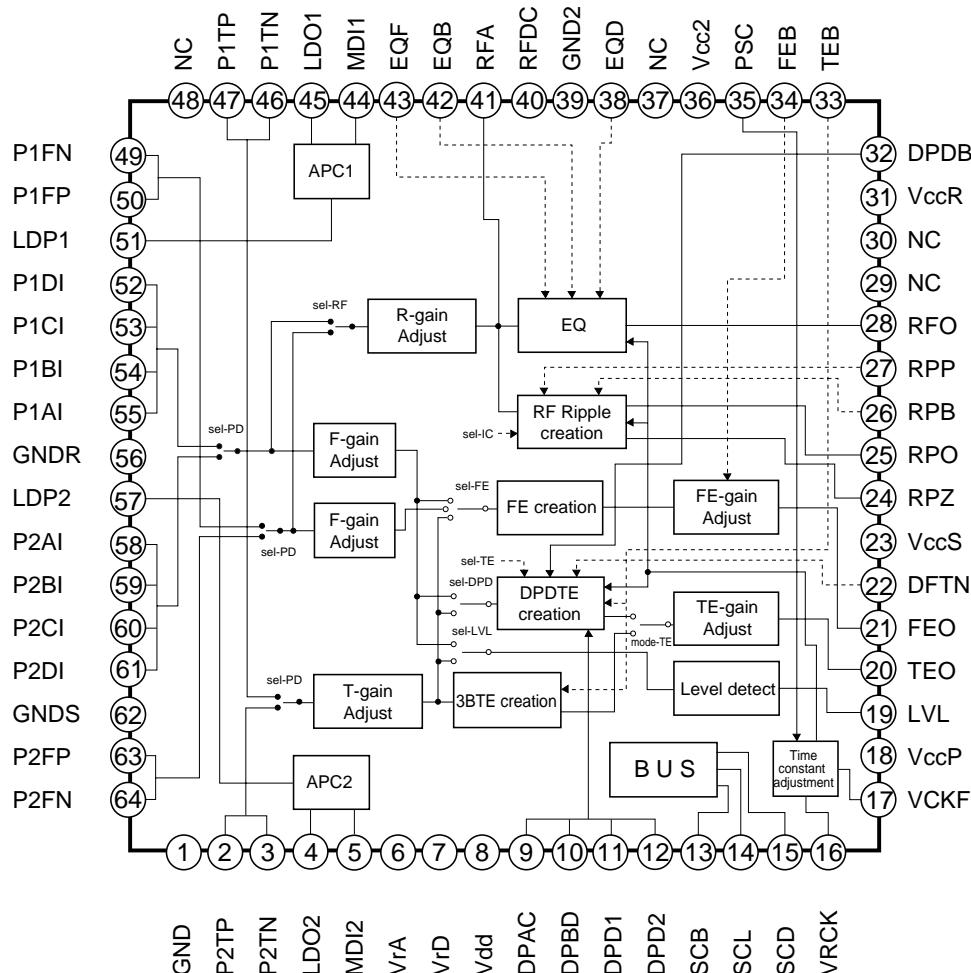


9-2. IC303 IX1517GE RF SIGNAL PROCESSOR

Pin No.	Terminal name	I/O	Operation function	Terminal DC Voltage(TYP.)	Remarks
1	GND	-	GND terminal.	-	
2	P2TP	I	TE+input (CD)	VrA	
3	P2TN	I	TE-input (CD)	VrA	
4	LDO2	O	Drive output	-	
5	MDI2	I	Monitor input	-	
6	VrA	O	Analog VREF	2.1[V]	
7	VrD	O	Digital VREF	-	Vdd 1/2
8	Vdd	I	Power terminal		4.2V (3.3V)
9	DPAC	-	DPD AC combination capacity 1	-	
10	DPBD	-	DPD AC combination capacity 2	-	
11	DPD1	-	DPD integral capacity 1	-	
12	DPD2	-	DPD integral capacity 2	-	
13	SCB	I	Control line (Bit clock)	2.2[V]	
14	SCL	I	Control line (Latch signal)	2.2[V]	
15	SCD	I	Control line (Serial Data)	2.2[V]	
16	VRCK	I	Reference clock input	2.3[V]	When frequency is increased, the filters excepting the servo LPF are shifted to high frequency side.
17	VCKF	-	Capacity for time constant adjustment	-	
18	VccP	-	Power terminal	-	
19	LVL	O	Servo addition output	Vrd x (1/2)	
20	TEO	O	TE output	VrD	
21	FEO	O	FE output	VrD	
22	DFTN	I	DPD defect	-	Low DPD output: Mute
23	VccS	-	Power terminal (servo)	-	
24	RPZ	O	RF ripple center voltage	VrD	
25	RPO	O	RF ripple output	VrD	
26	RPB	O	RF ripple bottom	-	
27	RPP	O	RF ripple peak	-	
28	RFO	O	Equalizing RF output	2.3[V]	
29	NC	-	NC terminal	-	To be connected to GND
30	NC	-	NC terminal	-	To be connected to GND
31	VccR	-	Power terminal (RF)	-	
32	DPDB	I	Pit depth adjustment	VrD	When DPDB is raised, the A/B side delay increases.
33	TEB	I	TE balance	VrD	When TEB is raised, the TP side gain increases and the A+C side delay increases.
34	FEB	I	FE balance	VrD	When FEB is raised, the A+C (FP) side gain increases.
35	PSC	I	VRCK frequency division ON/OFF	-	High: Frequency division OFF
36	Vcc2	-	Power terminal	-	
37	NC	-	NC terminal	VrD	To be connected to VrD, or to GND through C
38	EQD	I	Group delay correction	VrD	When EQD is raised, the group delay increases at the right side.
39	GND2	-	GND terminal.	-	
40	RFDC	-	DC feedback capacity	-	
41	RFA	O	RF total addition output	2.2[V]	
42	EQB	I	Boost adjustment	VrD	When EQB is raised, the boost increases.
43	EQF	I	Frequency adjustment	VrD	When EQF is raised, shift to the high frequency side occurs.
44	MDI1	I	Monitor input	-	
45	LDO1	O	Drive output	-	
46	P1TN	I	TE-input (DVD)	VrA	
47	P1TP	I	TE+input (DVD)	VrA	
48	NC	-	NC terminal	-	To be connected to GND
49	P1FN	I	FE-input (DVD)	VrA	
50	P1FP	I	FE+input (DVD)	VrA	
51	LDP1	I	APC polarity 1	-	Positive polarity when this terminal is connected to Vcc.
52	P1DI	I	D input (DVD)		

Pin No.	Terminal name	I/O	Operation function	Terminal DC Voltage(TYP.)	Remarks
53	P1CI	I	C input (DVD)	VrA	
54	P1BI	I	B input (DVD)	VrA	
55	P1AI	I	A input (DVD)	VrA	
56	GNDR	-	GND terminal (RF)	-	
57	LDP2	I	APC polarity 2	-	Positive polarity when this terminal is connected to Vcc.
58	P2AI	I	A input (CD)	VrA	
59	P2BI	I	B input (CD)	VrA	
60	P2CI	I	C input (CD)	VrA	
61	P2DI	I	D input (CD)	VrA	
62	GNDS	-	GND terminal (Servo)	-	
63	P2FP	I	FE+input (CD)	VrA	
64	P2FN	I	FE-input (CD)	VrA	

• Block Diagram



9-3. IC401 IX1622GE 4M DRAM

Terminal	Terminal name	Function
10~13,16~20,9	A0~A8,A9R	Address input
8	RAS	Row address strobe
23	CAS	Column address strobe
2~5,24~27	I/O1~I/O8	Data input/Data output
22	OE	Output enable
7	WE	Light enable
1, 14	Vcc	Power (5V)
15, 28	Vss	Ground (0V)
6, 21	NC	Not connected

9-4. IC402 IX1474GE DEM/ECC (DVD)

Pin No.	Terminal name	I/O	Operation function	Remarks
1	DPCK1	I	Signal processing reference clock input.	0.5-3.3Vp-p Feedback resistor built in.
2	DVDD3	-	Digital power. (3.3V)	For logic cell
3	SVCK1	I	Servo reference clock input. (Oscillation circuit input terminal)	3.3V-I/F Feedback
4	SVCK0	O	Servo reference clock output. (Oscillation circuit input terminal)	resistor built in.
5	DVSS	-	Digital power. (0V)	For logic cell
6	DVDD2	-	Digital power. (3.3V)	For logic cell
7	N.C.	-	User use prohibited.	Open
8	HDWR	I	MPU write signal.	TTL level
9	HDRD	I	MPU read signal.	TTL level
10	ECCCS	I	MPU chip selection.	TTL level
11	D8	I/O	MPU data bus.	TTL level
12	D9	I/O	MPU data bus.	TTL level
13	D10	I/O	MPU data bus.	TTL level
14	D11	I/O	MPU data bus.	TTL level
15	D12	I/O	MPU data bus.	TTL level
16	D13	I/O	MPU data bus.	TTL level
17	D14	I/O	MPU data bus.	TTL level
18	D15	I/O	MPU data bus.	TTL level
19	DVSS	-	Digital power. (0V)	For I/O cell
20	DVDD5	-	Digital power. (5V)	For I/O cell
21	HINT	O	MPU interruption signal. (Occurrence of interruption = "L")	OPEN DRAIN
22	HA0	I	MPU address bus.	TTL level
23	HA1	I	MPU address bus.	TTL level
24	PLCK	I/O	Read channel clock input/output terminal.	
25	ED0	-	User use is prohibited (N.C.) since it is for shipping adjustment.	Open
26	ED1	-		
27	ED2	-		
28	ED3	-		
29	ED4	-		
30	ED5	-		
31	ED6	-		
32	ED7	-		
33	TEST	I	For shipping adjustment.	Set to "L"
34	PDON	O	PLL phase error signal output. (Negative polarity)	
35	PDOP	O	PLL phase error signal output. (Positive polarity)	
36	RLLD	O	RLL detection result output.	
37	LPFN	I	PLL loop filter amp. reverse input.	
38	LPFO	O	PLL loop filter amp. output.	
39	VCOF	O	VCO filter terminal.	
40	SLCO	O	Built-in comparator reference voltage output terminal.	
41	AVSS	-	Analog power. (0V)	
42	AVR	O	Non-PLL system analog reference potential. (1.65V)	
43	VRC	-	Resistance division point potential. (For analog reference potential generation: 1.65)	
44	PVR	O	PLL system analog reference potential. (1.65V)	
45	AVDD	-	Analog power. (3.3V)	
46	RVR2	-	2nd reference voltage. (For capacitor connection)	
47	RVDD	-	Exclusive-use power terminal. (3.3V)	
48	RFIN	I	RF signal input.	
49	RVSS	-	Exclusive-use power terminal. (0V)	
50	RVR1	-	1nd reference voltage. (For capacitor connection)	
51	DVR	I	DMO reference potential. (1.65V recommended)	
52	DMO	O	Disc equalizer output for DVD. (Triple value PWM + HiZ)	
53	RASN	O	External RAM row address selection. (Negative logic)	
54	CASN	O	External RAM row address selection. (Negative logic)	

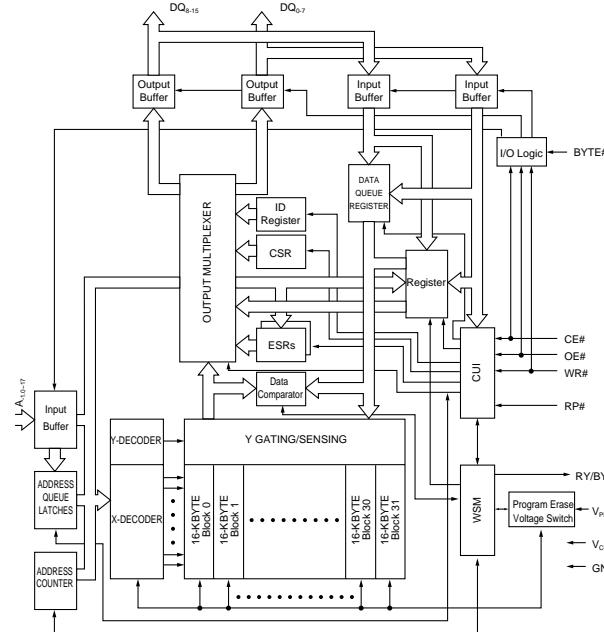
Pin No.	Terminal name	I/O	Operation function	Remarks
55	MOEN	O	External RAM output permission signal.	
56	MWEN	O	External RAM read/write selection.	
57	DVSS	-	Digital power. (0V)	For logic cell
58	DVDD3	-	Digital power. (3.3V)	For logic cell
59	MA9	O	External RAM address bus.	
60	MA8	O	External RAM address bus.	
61	MA7	O	External RAM address bus.	
62	MA6	O	External RAM address bus.	
63	MA5	O	External RAM address bus.	
64	MA4	O	External RAM address bus.	
65	MA3	O	External RAM address bus.	
66	MA2	O	External RAM address bus.	
67	MA1	O	External RAM address bus.	
68	MA0	O	External RAM address bus.	
69	DVSS	-	Digital power. (0V)	For I/O cell
70	DVDD5	-	Digital power. (5V)	For I/O cell
71	MD7	I/O	External RAM data bus.	TTL level
72	MD6	I/O	External RAM data bus.	TTL level
73	MD5	I/O	External RAM data bus.	TTL level
74	MD4	I/O	External RAM data bus.	TTL level
75	MD3	I/O	External RAM data bus.	TTL level
76	MD2	I/O	External RAM data bus.	TTL level
77	MD1	I/O	External RAM data bus.	TTL level
78	MD0	I/O	External RAM data bus.	TTL level
79	SD7	O	MPEG data output.	
80	SD6	O	MPEG data output.	
81	SD5	O	MPEG data output.	
82	SD4	O	MPEG data output.	
83	DVSS	-	Digital power. (0V)	For logic cell
84	DVDD3	-	Digital power. (3.3V)	For logic cell
85	SD3	O	MPEG data output.	
86	SD2	O	MPEG data output.	
87	SD1	O	MPEG data output.	
88	SD0	O	MPEG data output.	
89	SERR	O	MPEG data reliability flag. (Data error: "L")	
90	SOSO	O	MPEG output sector sync signal. (Sector top: "L")	
91	SVAL	O	MPEG data effective flag. (Effective state: "L")	
92	SDCK	O	MPEG data transfer clock.	
93	DVSS	-	Digital power. (0V)	For logic cell
94	SREQ	I	MPEG data request flag. (Request state: "L")	TTL level
95	RSTN	I	Hard reset input. (Reset state: "L")	
96	DVDD3	-	Digital power. (3.3V)	For logic cell
97	STDA	O	Operation state monitor data. (Output synchronizing with SDCK fall)	Common with PWM.
98	STCK	O	Operation state monitor sync signal. (Data top bit: "L")	Common with PWM.
99	UPWM	O	General-use PWM output.	4mA, 5V-I/F
100	DVSS	-	Digital power. (0V)	For logic cell

9-5. IC501 IX1626GE

FLASH MEMORY

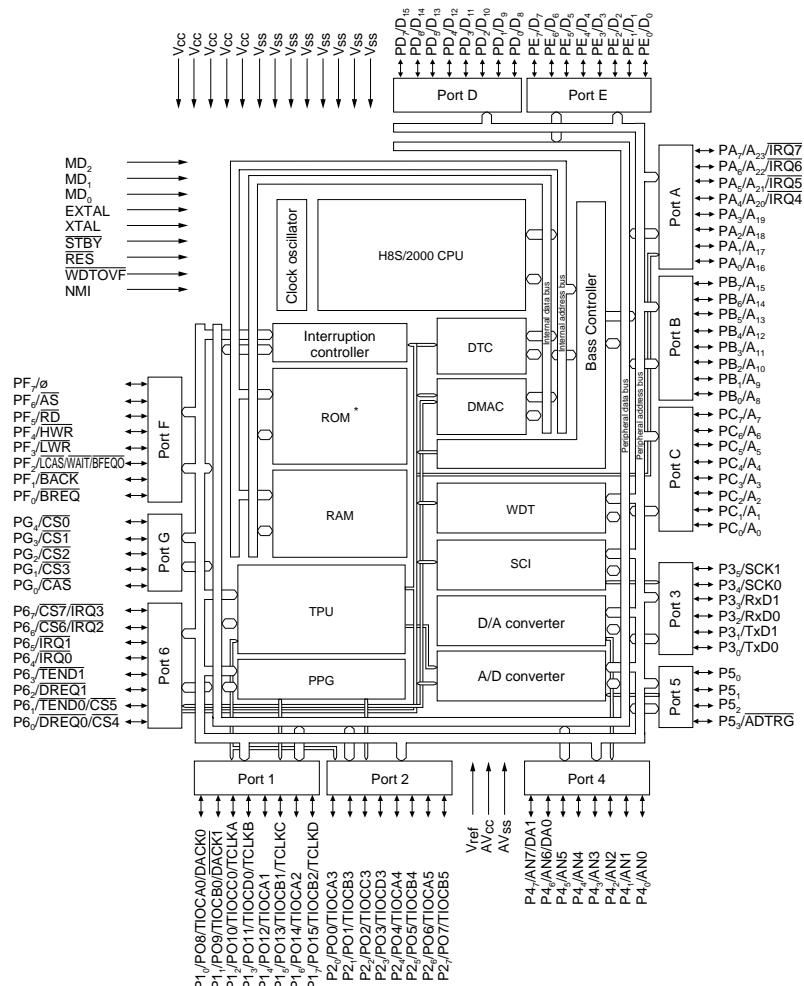
Pin No.	Symbol	Type	Name and function
45	DQ ₁₅ /A ₋₁	Input	Byte selection address: When the device is in the x8 mode, the low or high order byte is selected. It is not used in the x16 mode. (If BYTE# is high, DQ ₁₅ /A ₋₁ input circuit does not operate.)
25, 24~18, 8~4	A ₀ -A ₁₂	Input	Word selection address: Selection of one word of 16k byte block. These addresses are latched during data wiring operation.
3~1, 16, 48, 17	A ₁₃ -A ₁₈	Input	Block selection address: Selection of 1/32 erase block. These addresses are latched during data writing, erasing and lock block operation.
29, 31, 33, 35, 38, 40, 42, 44	DQ ₀ -DQ ₇	Input/Output	Low order byte data input/output: Command user interface writing cycle data and command input. Various data read memory identifier and status data output Chip nonselection or output disable: Float state
30, 32, 34, 36, 39, 41, 43, 45	DQ ₈ -DQ ₁₅	Input/Output	High order byte data input/output: The function is the same as that of low order byte data input/output. Operative only in x16 mode. x8 mode: Float state DQ ₁₅ /A ₋₁ is address.
26	CE#	Input	Chip enable: Device control logic, input buffer, decoder and sense amp. are activated. Chip becomes active only when CE# is "Low".
12	RP#	Input	Reset/Power down: If RP# is set to "Low", the control circuit is initialized when power is turned on. Hence, the RP# pin is set to "Low". When power is turned on or off or in case of fluctuation it is kept at "Low" so as to protect data from noise. When RP# is in "Low" state, the device is in deep power down state. 480 ns is required to recover from the deep power down state. If the RP# pin becomes "Low", the whole chip operation is interrupted and reset. After recovery the device is set to array read state.
28	OE#	Input	Output enable: When OE# is set to "Low", data is output from the DQ pin. When OE# is set to "High", the DQ pin is set to float state.
11	WR#	Input	Write enable: Command user interface, data Q register and address Q latch access is controlled. In "Low" state WR# becomes active. At rise edge the address and data are fetched.
14	WP#	Input	Write protection: Blanking/writing to the boot block area is input of prohibition control. Blanking to the boot block area and writing actuation can't be executed at the time of WP#=V _{IL} .
15	RY/BY#	Output	Ready/busy: The state of internal write state machine is output. In "Low" state it is indicated that the write state machine is in operation. If the write state machine waits for next operation instruction, erase is suspended or it is in deep power down state, the RY/BY# pin is in float state.
47	BYTE#	Input	Byte enable: When BYTE# is set to "Low", the device is set to the x8 mode. At this time the DQ ₈ -DQ ₁₅ pin becomes float state. Address A ₋₁ selects high order/low order byte. When BYTE# is "High", the device is set to the x16 mode. The A ₋₁ input circuit is disabled.
13	V _{pp}		Write/erase power supply: 5.0 ± 0.5V is applied during writing/erasing.
37	V _{cc}		Device power supply: 5.0 ± 0.5V
27, 46	GND		Ground
9, 10	NC		Nonconnection

• Block Diagram



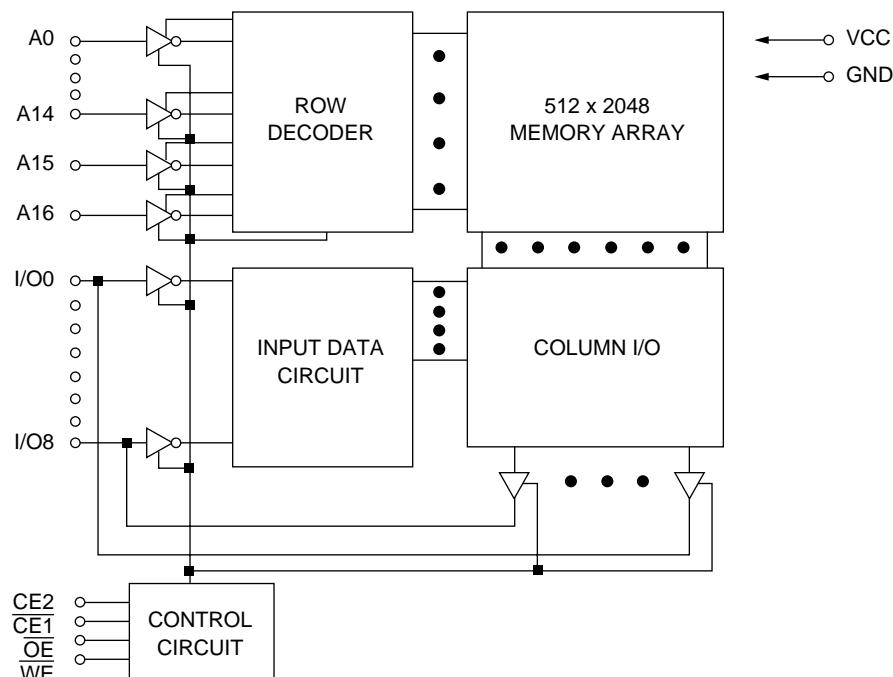
9-6. IC504 IX1478GE

MICRO COM.



9-7. IC506 IX1618GE

1M SRAM



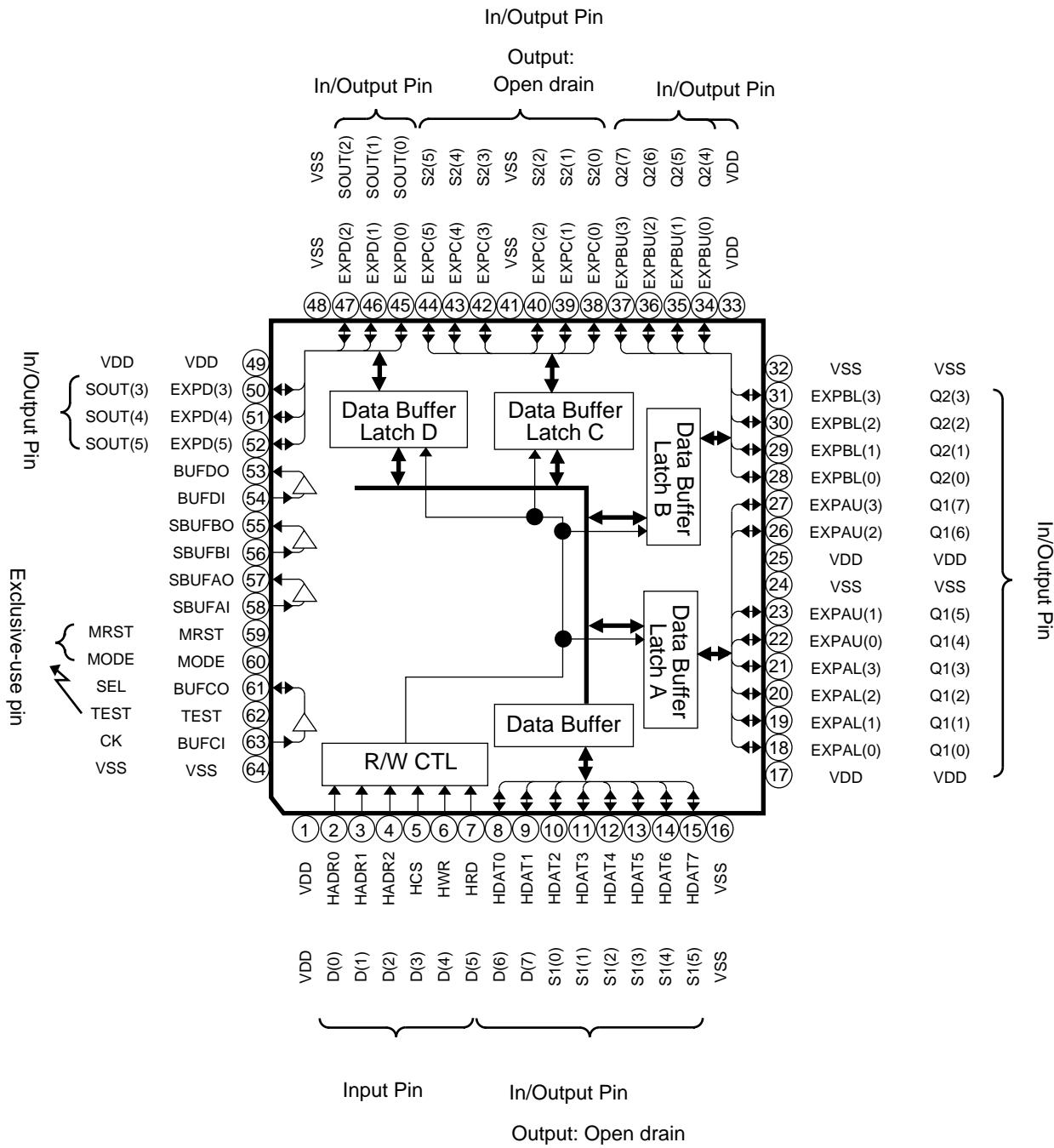
9-8. IC512 IX1535GE HOST I/F

Terminal	Terminal name	In/Output	Function
1	VDD	–	Power +3.3V
2	HADRO	Input	CPU Address bus
3	HADR1	Input	CPU Address bus
4	HADR2	Input	CPU Address bus
5	HCS	Input	CPU Tip select
6	HWR	Input	CPU Write signal
7	HRD	Input	CPU Read signal
8	HDAT0	In/Output	CPU Data bus
9	HDAT1	In/Output	CPU Data bus
10	HDAT2	In/Output	CPU Data bus
11	HDAT3	In/Output	CPU Data bus
12	HDAT4	In/Output	CPU Data bus
13	HDAT5	In/Output	CPU Data bus
14	HDAT6	In/Output	CPU Data bus
15	HDAT7	In/Output	CPU Data bus
16	VSS	–	Digital GND
17	VDD	–	Power +3.3V
18	EXPAL (0)	In/Output	General-use input/output terminal Gr.A
19	EXPAL (1)	In/Output	General-use input/output terminal Gr.A
20	EXPAL (2)	In/Output	General-use input/output terminal Gr.A
21	EXPAL (3)	In/Output	General-use input/output terminal Gr.A
22	EXPAU (0)	In/Output	General-use input/output terminal Gr.A
23	EXPAU (1)	In/Output	General-use input/output terminal Gr.A
24	VSS	–	Digital GND
25	VDD	–	Power +3.3V
26	EXPAU (2)	In/Output	General-use input/output terminal Gr.A
27	EXPAU (3)	In/Output	General-use input/output terminal Gr.A
28	EXPBL (0)	In/Output	General-use input/output terminal Gr.B
29	EXPBL (1)	In/Output	General-use input/output terminal Gr.B
30	EXPBL (2)	In/Output	General-use input/output terminal Gr.B
31	EXPBL (3)	In/Output	General-use input/output terminal Gr.B
32	VSS	–	Digital GND
33	VDD	–	Power +3.3V
34	EXPBU (0)	In/Output	General-use input/output terminal Gr.B
35	EXPBU (1)	In/Output	General-use input/output terminal Gr.B
36	EXPBU (2)	In/Output	General-use input/output terminal Gr.B
37	EXPBU (3)	In/Output	General-use input/output terminal Gr.B
38	EXPC (0)	In/Output	General-use input/output terminal Gr.C
39	EXPC (1)	In/Output	General-use input/output terminal Gr.C
40	EXPC (2)	In/Output	General-use input/output terminal Gr.C
41	VSS	–	Digital GND
42	EXPC (3)	In/Output	General-use input/output terminal Gr.C
43	EXPC (4)	In/Output	General-use input/output terminal Gr.C
44	EXPC (5)	In/Output	General-use input/output terminal Gr.C
45	EXPD (0)	In/Output	General-use input/output terminal Gr.D
46	EXPD (1)	In/Output	General-use input/output terminal Gr.D
47	EXPD (2)	In/Output	General-use input/output terminal Gr.D
48	VSS	–	Digital GND
49	VDD	–	Power +3.3V
50	EXPD (3)	In/Output	General-use input/output terminal Gr.D
51	EXPD (4)	In/Output	General-use input/output terminal Gr.D
52	EXPD (5)	In/Output	General-use input/output terminal Gr.D
53	BUFDO	Output	Buffer output D
54	BUFDI	Input	Buffer input D
55	SBUFBO	Output	Schmidt buffer output B
56	SBUFBI	Input	Schmidt buffer input B
57	SBUFAO	Output	Schmidt buffer output A
58	SBUFAI	Input	Schmidt buffer input A
59	MRST	Input	Reset terminal
60	MODE	Input	Mode selection terminal
61	BUFCO	In/Output	Buffer output C
62	TEST	Input	Test terminal (for Epson)
63	BUFCI	Input	Buffer input C
64	VSS	–	Digital GND

Pin1~15 There is a possibility of simultaneous change.
 Pin18~47 There is a possibility of simultaneous change.(Static signal)
 Pin50~57 There is almost no possibility of simultaneous change.
 Pin63 Not used

Operating frequency: Approx. 10 MHz
 Operating frequency: Approx. 1 MHz
 Operating frequency: Approx. 1 MHz

• Block Diagram



9-9. IC601 IX1608GE

Pin No.	Pin name	Type	I/O	Function
Host interface, CD-DSP interface, subcode interface (32-pin)				
141	RESET#	I	I	Reset input (active low). When deassert is applied in the asserted state, the initializing process of MD36710X is started.
130	PWRDN#	I	I	Stand-by input (active low). When it is asserted together with RESET#, all output pins and bidirectional pins are floated to separate MD36710X electrically from the peripherals. The inner operation is wholly stopped to also minimize the power consumption. In the stand-by mode, the contents of SDRAM are not held.
142	IDLE	3-S	O	Idle, init or reset state display output (active high)
35	HWID	I	I	The data bus width of the host interface is determined. Only during reset, change is possible. For the low level (GND), the host interface of MD36710X is set to 8 bits but set to the 16-bit width for the high level (V_{DD}).
36	HORD	I	I	In the 16-bit width mode (HWIS is V_{DD}), the byte order of the data bus of the host interface is determined. It can be changed only during reset. MD36710X is set to input or output m.s. bytes at HD [15:8] for the low level (GND) and at HD [7:0] for the high level (V_{DD}). When HWID is at the GND level, it is connected to GND.
37	HTYPE	I	I	The protocol of the host bus is determined. It can be changed only during reset. MD36710X is set to the type A for the low level (GND) and to the type B for the high level (V_{DD}).
12, 14~17, 19~21	HD[7:0]	3-S	I/O	8 I.s. of the host data bus. When HWID input is connected to GND, only the 8 I.s. signal is defined as the host data signal. When HWID is connected to V_{DD} , it is defined as the 8 I.s. line of 16-bit data bus.
7, 9~11 7 9 10 11	HD[11:8] NC (HD[11]) NC (HD[10]) NC (HD[9]) NC (HD[8])	3-S O I I I	I/O O I I I	When HWID is connected to V_{DD} , it becomes the data line 11:8 of the 16-bit host data bus. When HWID is connected to GND, it becomes NC pin as specified below. For test (output) For test (input) For test (input) For test (input)
3~6	HD[15:12]	3-S	I/O	When HWID is connected to V_{DD} , it becomes the data line 15:12 of the 16-bit host data bus. When HWID is connected to GND, it becomes CD-DSP serial input port pin as specified below.
6 5 4 3	CDDAT (HD[12]) CDDAT (HD[13]) CDFRM (HD[14]) CDERR (HD[15])	I I I I	I	CD-DSP bit clock input CD-DSP data input CD-DSP LR clock (frame) input CD-DSP data error input
22, 24~26	HA[3:0]	I	I	Host address input. The address signal to specify the physical address in MD36710X is input.
29	HCS#	I	I	Host chip select input. Active low
27	HWR# (HR/W#)	I	I	Host protocol A type (HTYPE = GND): HR/W#. Input to determine the host access direction. Host protocol B type (HTYPE = VDD): HWR#. Host write input (active low).
30	HRD# (HDS#)	I	I	Host protocol A type (HTYPE = GND): HDS#. Data strobe input (active low). Host protocol B type (HTYPE = VDD): HRD#. Host read input (active low).
31	HRDY	3-S	O	Host ready output (active high). To transfer the stream via the host bus using this signal, use this signal. Moreover, the external pull-up resistor is necessary. It is possible to check that the transfer of CodBurstLen byte length is regarded as one packet and the signal is active before start of transfer of each packet and continuously write the bit stream up to CodBurstLen into MD36710X.
34	HIRQ#	3-S	O	Interrupt request (Active low). It is deasserted as the host leads the interrupt status register of MD36710X. Moreover, it is also deasserted after the host masks or resets the interrupt with the interrupt mask register of MD36710X. If HIRQ# is not asserted, it enters the 3-state state. (The external pull-up resistor is necessary.)
32	HACK#	3-S	O	Host acknowledge output (active low). For the protocol of type A, MD36710X asserts the output to inform the end of the read or write cycle. If the signal is not active, it enters the 3-state state. (The external pull-up resistor is necessary.) For the protocol of type B, it functions as the wait output signal. If the high-speed host (microcomputer) is used, it is sometimes unnecessary to connect the signal.

Pin No.	Pin name	Type	I/O	Function
GPI/O signal (4-pin)				
122,123	GPAI/O [1:0]	3-S	I/O	General purpose bidirectional pin for monitor and control with ADP microcode. After resetting, this pin is defined as the input. If ADP command is used, setting is possible.
2	GPSI	I	I	General purpose input for monitor with DVP microcode.
159	GPSO	O	O	General purpose output for control with DVP microcode.
PLL signal (6-pin)				
129	GCLK	I	I	27,000MHz clock or crystal input for main processor
126	GCLK1	I	I	27,000MHz master clock input for audio. It must be connected to GCLK during ordinary operation.
128	XO	O	O	Output to crystal connected to GCLK. If crystal is not used in GCLK, XO is not connected.
136	PLLCA			Capacitor connection pin for PLL. Connect 47nF capacitor. Connect the other terminal of the capacitor to PLLGND.
137,135	PLLFGF [1:0]	I	I	PLL configuration input. Change is possible during reset only. In the normal use, both pins must be connected to (digital) GND.
Digital video port (24-pin)				
92, 94~97, 99~101	Y [7:0]	3-S	O	In the 16-bit video mode (Video8 = 0), the line becomes the luminance output. In the 8-bit mode (Video8 = 1), it becomes the luminance/color difference output which is timely multiple-processed according to ITU-R656 standard (regardless whether SAV, EAV sync code is present or not).
102, 104~107, 109~111	C [7:0] OSDPEL[3:0] (C[3:0]) OSDPLT (C[4])	3-S	I/O	In the 16-bit video mode (Video8 = 0), the line becomes the color difference output. In the 8-bit mode (Video8 = 1), the pin 3 (C[7:5]) of m.s. line is not used, and 1.s.5 pin (C[4:0]) is specified as the input which is received from the external OSD device. OSD pixel input. The four signals are used as the entry to on-chip OSD pallet. On-chip OSD pallet selector. OSDPallet0 is selected for the low level, and OSDpallet1 is selected for the high level.
124	VCLKX2	3-S	I/O	Main video clock input or output. 27,000MHz
84	VCLK	3-S	I/O	VCLKx2 signal is divided into two parts. The signal is used as the qualifier of the data and sync signal.
90	HSYNC	3-S	I/O	Horizontally sync bidirection signal pin. The polarity and length are programmable.
89	VSYNC	3-S	I/O	Vertically sync bidirectional signal pin. The polarity and length are programmable.
91	FI	3-S	I/O	Field identification bidirectional signal pin. The polarity is programmable.
88	CBLANK	O	O	Composite blank output. The waveform including the polarity is programmable.
85	VMASTER	I	I	Video master/slave selection input. For the high level, the video synchronization of MD36710X goes into the master mode. (Accordingly, the video SYNC signal and clock are output.) For the low level, the video synchronization goes into the slave mode. (Accordingly, the video SYNC signal and clock are input.) Only in the reset mode, the setting of the terminal can be changed.
87	VDEN#	I	I	Video enable input (active low). When it is active, MD36710X outputs the video data. When it is deasserted, the pixel output goes into the 3-state. (However, the sync signal and clock are kept to be active.) Though this input can be changed at any time, it is valid at the following VCKx2 time.
Digital audio port (8-pin)				
132	AMCLK	3-S	O	Audio master clock input/output. The sampling frequencies of 384fs, 256fs, 192fs and 128fs can be selected (programmable).
117	S/PDIF(AOUT[3])	O	O	S/DDIF transmitter output. Moreover, it can be connected to DAC as the 4th audio output (AOUT[3]). After resetting, the pin outputs the low level.
116~114	AOUT [2:0]	O	O	Serial output of PCM stereo audio for DAC. After resetting, the pin outputs the low level. Only for AOUT[0], the sample width of 24 bits is supported.
112	AIN	I	I	Serial input of PCM stereo audio for ADC.
118	ALRCLK	O	O	LR clock output of AOUT[3.0] and ATN. For the sampling frequency, it is a rectangular wave. The polarity of LR is programmable.
119	ABCLK	O	O	Bit clock output of AOUT[3.0] and AIN. AOUT is output at the rise/fall edges of the clock (programmable), and AIN is latched.

Pin No.	Pin name	Type	I/O	Function
DVD-DSP interface (13-pin)				
148	DVDREQ	O	O	DVD-DSP data request output (polarity programmable)
146	DVDVALID	I	I	DVD-DSP data valid input (polarity programmable)
144	DVDSOS	I	I	DVD-DSP data selector start input (polarity programmable)
*1	DVDDAT [7:0]	I	I	DVD-DSP data input bus
147	DVDSTRB	I	I	DVD-DSP data bit strobe (clock) input. Polarity programmable.
143	DVDERR	I	I	DVD-DSP error input. Polarity programmable.
SDRAM interface (35-pin)				
*2	RAMDAT [15:0]	3-S	I/O	SDRAM bidirectional data bus
*3	RAMADD [11:0]	O	O	SDRAM address bus output
56	RAMRAS#	O	O	SDRAM row selection (active low) output
59	RAMCAS#	O	O	SDRAM column selection (active low) output
57	PCLK	O	O	SDRAM clock output (similar to the inner process clock)
61	RAMDQM	O	O	SDRAM data masking (active high) output
54	RAMCS0#	O	O	SDRAM chip select (active low) output. For lower order of 2Mbyte device.
55	RAMCS1#	O	O	SDRAM chip select (active low) output. For higher order of 2Mbyte device.
60	RAMWE#	O	O	SDRAM write enable (active low) output.
TEST signal (3-pin)				
127	SCNENBL	I	I	Test pin. Usually connected to GNG.
83	TESTMODE	I	I	Test pin. Usually connected to VDD.
139	ICEMODE	I	I	Test pin. Usually connected to VDD.
Power signal (35-pin)				
*4	GND	ground		Digital GND
*5	VDD	power		Digital power supply (3.3V)
134	PLLGND (GNDA)	ground		GND of inner PLL circuit
138	PLLVDD (VDDA)	power		Power supply of inner PLL circuit (3.3V)

*1 158~156, 154~151, 149

*2 79, 77, 75, 72, 70, 67, 65, 62, 64, 66, 69, 71, 74, 76, 78, 82

*3 52, 50, 51, 49, 46, 44, 42, 38, 39, 43, 45, 47

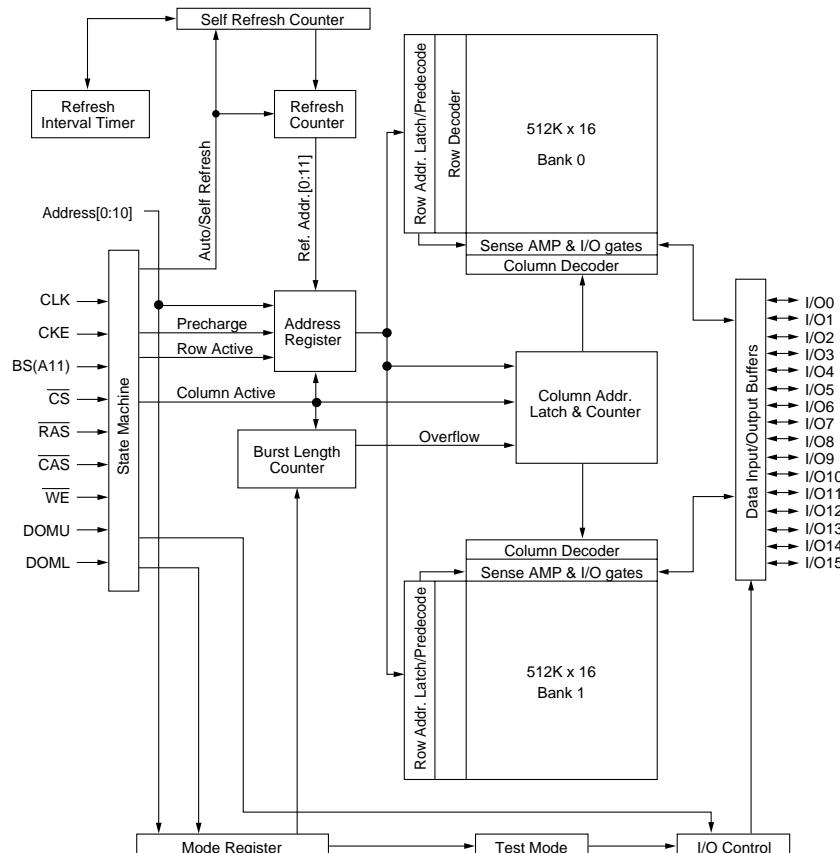
*4 1, 13, 23, 40, 41, 53, 68, 80, 81, 93, 108, 120, 121, 125, 131, 145, 160

*5 8, 18, 28, 33, 48, 58, 63, 73, 86, 98, 103, 113, 133, 140, 150, 155

9-10. IC602 IX0793TA 16M SDRAM

Terminal	Terminal Name	Name	Input Function
35	CLK	System Clock	Active on the positive going edge to sample all inputs.
18	CS	Chip Select	Disables or enables device operation by masking or enabling all inputs except CLK, CKE and DOML(U)
34	CKE	Clock Enable	Masks system clock to freeze operation from the next clock cycle. CKE should be enabled at least one cycle prior to new command. Disable input buffers for power down in stanby.
21~24 27~32 20	A0~A10/AP	Address	Row/column address are multiplexed on the same pins. Row address: RA0~RA10, column address: CA0~CA7
19	BS	Bank Select Address	Selects bank to be activated during row address latch time. Selects bank for read/write during column address latch time.
17	RAS	Row Address Strobe	Latches row address on the positive going edge of the CLK with RAS low. Enables row access & precharge.
16	CAS	Column Address Strobe	Latches addresses on the positive going edge of the CLK with CAS low. Enables row access.
15	WE	Write Enable	Enable write operation and row precharge. Latches data in starting from CAS, WE active.
14, 36	DOML(U)	Data Input/Output Mask	Makes data output Hi-Z, tsHZ after the clock and masks the output. Blocks data input when DOML(U) active.
2, 3, 5, 6, 8, 9, 11, 12, 39, 40, 42, 43, 45, 46, 48, 49	I/O0~15	Data Input/Output	Data inputs/outputs are multiplexed on the same pins.
1, 25, 26	VCC/VSS	Power Supply/Ground	Power and ground for the input buffers and the core logic.
4, 7, 10, 13, 38, 41, 44, 47, 50	VCCO/VSSO	Data Output Power/Ground	Isolated power supply and ground for the output buffers to provide improved noise immunity.
33, 37	NC	No Connection	This pin is recommended to be left No Connection on the device

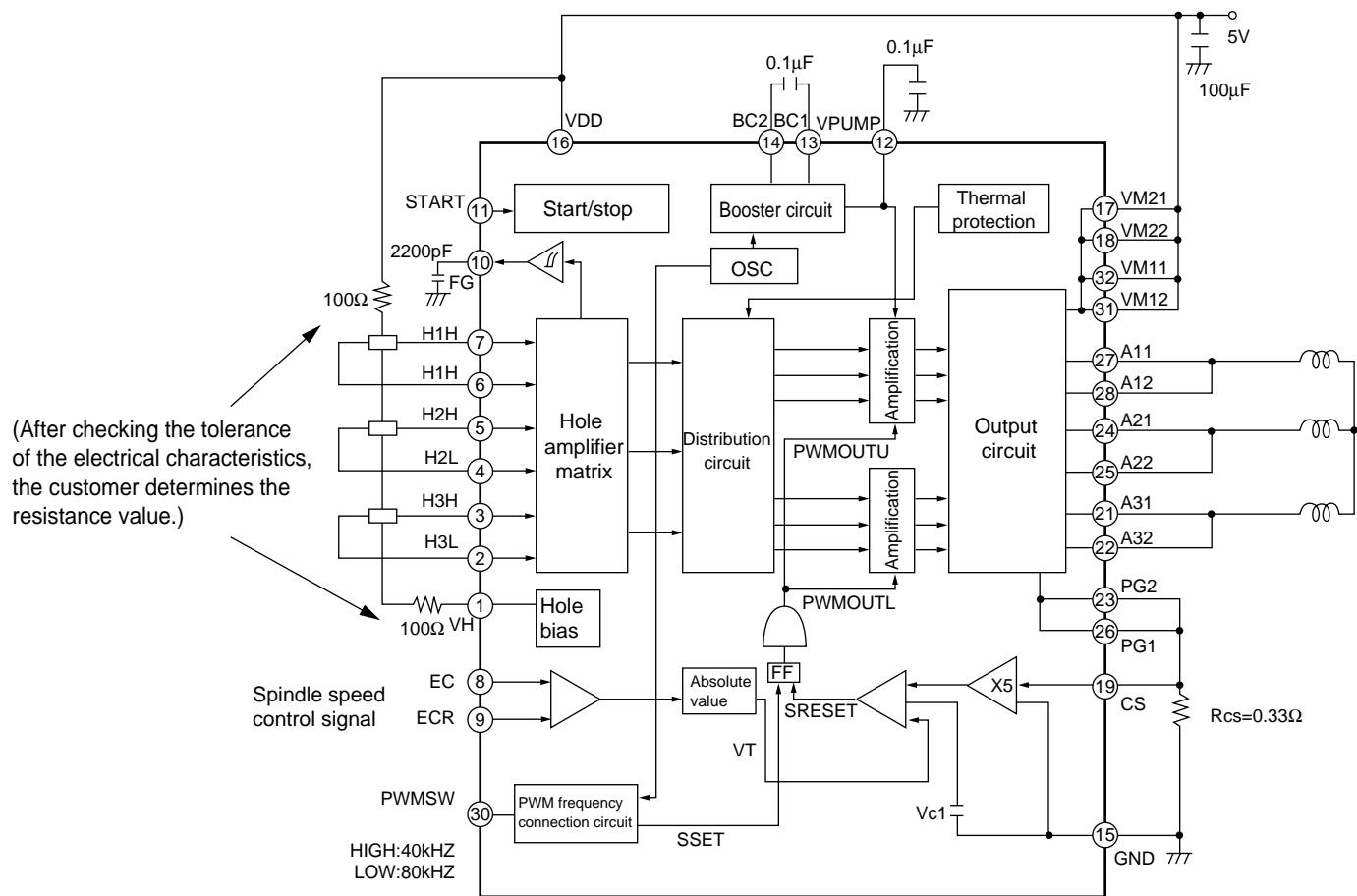
• Block Diagram



9-11. IC701 AN8473NS-1

Pin No.	Terminal name	Operation function	Pin No.	Terminal name	Operation function
1	VH	Hole bias terminal	17	VM21	Motor power terminal 2
2	H3L	Hole element 3 negative input terminal	18	VM22	Motor power terminal 2
3	H3H	Hole element 3 positive input terminal	19	CS	Current detection terminal
4	H2L	Hole element 2 negative input terminal	20	NC	N. C.
5	H2H	Hole element 2 positive input terminal	21	A31	Drive output 3
6	H1L	Hole element 1 negative input terminal	22	A32	Drive output 3
7	H1H	Hole element 1 positive input terminal	23	PG2	Power current detection terminal 2
8	EC	Torque command input terminal	24	A21	Drive output 2
9	ECR	Torque command reference input terminal	25	A22	Drive output 2
10	FG	FG signal output terminal	26	PG1	Power current detection terminal 1
11	START	Start/stop selection terminal	27	A11	Drive output 1
12	VPUMP	Booster terminal	28	A12	Drive output 1
13	BC1	Booster capacitor connection terminal	29	NC	N. C.
14	BC2	Booster capacitor connection terminal	30	PWMSW	PWM frequency selection terminal
15	GND	GND terminal	31	VM12	Motor power terminal 1
16	VDD	Power terminal	32	VM11	Motor power terminal 1

- Block Diagram

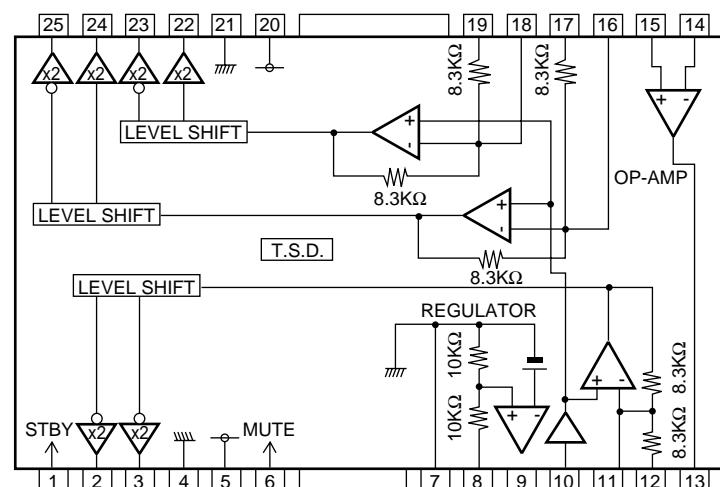


9-12. IC702 BA5933FP

Pin No.	Terminal name	Operation function	Pin No.	Terminal name	Operation function
1	STBY	Stand-by mode selector switch	13	OP_OUT	Operation amplifier output
2	OUT+	CH1 positive output terminal	14	OP_IN(-)	Operation amplifier negative input
3	OUT-	CH1 negative output terminal	15	OP_IN(+)	Operation amplifier positive input
4	GND	GND	16	IN2'	CH2 gain adjustment input terminal
5	VCC	VCC	17	IN2	CH2 gain fixed input terminal
6	MUTE	Mute terminal	18	IN3'	CH3 gain adjustment input terminal
7	GND	Substrate GND	19	IN3	CH3 gain fixed input terminal
8	REG_OUT	Constant voltage output (collector of external Tr)	20	VCC	VCC
			21	GND	GND
9	REG_B	Connected to the base of external Tr	22	OUT3-	CH3 negative output terminal
10	BIAS	Bias input terminal	23	OUT3+	CH3 positive output terminal
11	IN1'	CH1 gain adjustment input terminal	24	OUT2-	CH2 negative output terminal
12	IN1	CH1 gain fixed input terminal	25	OUT2+	CH2 positive output terminal

* The negative/positive pole of the output terminal is the polarity against the input.

- Block Diagram



T.S.D ; Thermal shutdown
Unit of resistance is [Ω].

9-13. IC707 IX1473GE

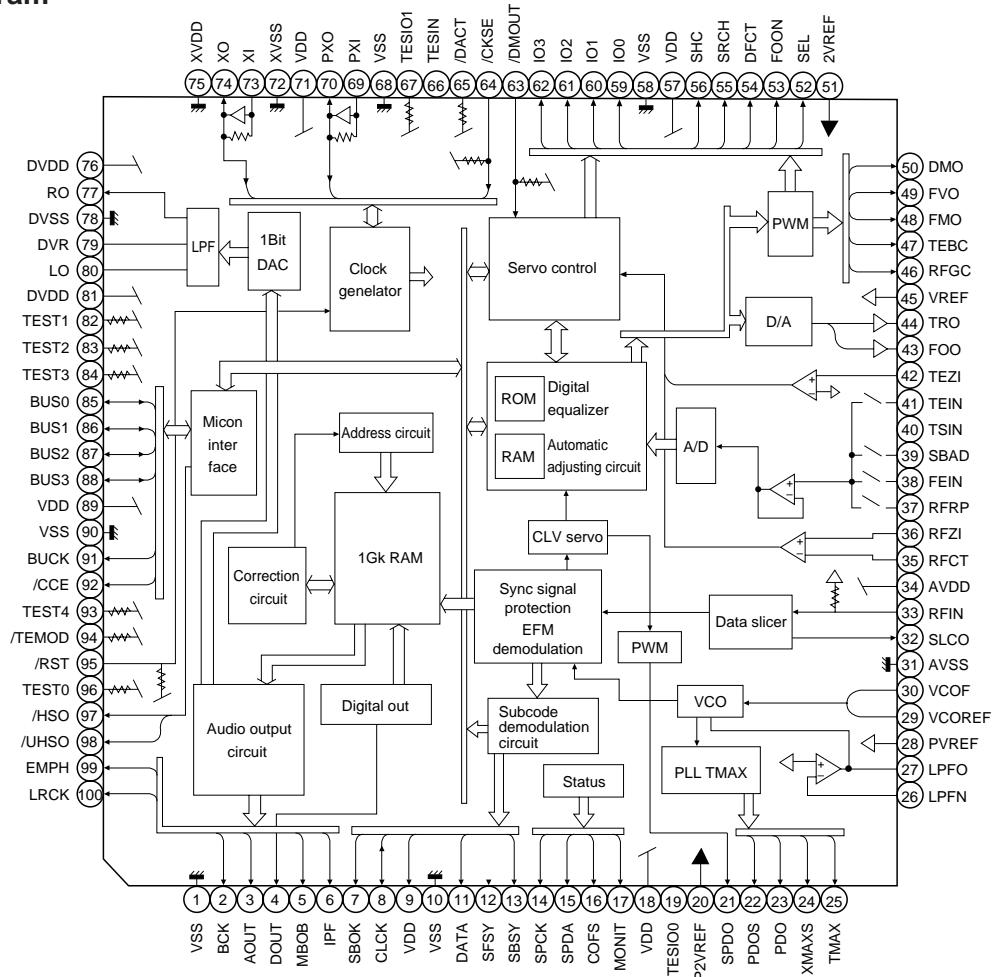
SERVO PROCESSOR

Pin No.	Terminal name	I/O	Operation function	Remarks								
1	VSS	-	Digital ground terminal.									
2	BCK	O	Bit clock (1.4122MHz) output terminal.									
3	AOUT	O	Audio data output terminal.									
4	DOUT	O	Digital out output terminal.									
5	MBOB	O	Buffer memory over signal output terminal. Over: "H"									
6	IPF	O	Correction flag output terminal. When correction disable symbol is given if AOUT output is C2 correction: "H".									
7	SBOK	O	Sub-code Q data CRCC judgment result output terminal. Judgment result OK: "H".									
8	CLK	I/O	Sub-code P to W data read clock output/input terminal. Selectable with command bit.									
9	VDD	-	Digital + power terminal									
10	VSS	-	Digital ground terminal									
11	DATA	O	Sub code P-W data output terminal.									
12	SFSY	O	Playback system frame sync signal output terminal.									
13	SBSY	O	Subcode block sync output terminal. When subcode sync is detected, S1 position: "H".									
14	SPCK	O	Processor status signal read clock (176.4 kHz) output terminal.									
15	SPDA	O	Processor status signal output terminal.									
16	COFS	O	Correction system frame clock (7.35 kHz) output terminal.									
17	MONIT	O	LSI internal signal monitor terminal. DSP internal flag and PLL system clock can be monitored with microcomputer command.									
18	VDD	-	Digital + power terminal.									
19	TESIO0	I	Test input/output terminal. Usually fixed to "L".									
20	P2VREF	-	PLL system 2VREF terminal.									
21	SPDO	O	VCO center frequency shift terminal.									
22	PDOS	O	EFM and PLCK signal phase error signal output terminal. (To be used when x8 speed operation is used)									
23	PDO	O	EFM and PLCK signal phase error signal output terminal.									
24	XMAXS	O	TMAX detection result output terminal. To be selected with command bit TMPS.									
25	TMAX	O	<table border="1"> <tr> <td>TMAX detection result</td> <td>TMAXoutput</td> </tr> <tr> <td>Longer than specific period</td> <td>"P2VREFF"</td> </tr> <tr> <td>Shorter than specific period</td> <td>"VSS"</td> </tr> <tr> <td>Within specified period</td> <td>"HiZ"</td> </tr> </table>		TMAX detection result	TMAXoutput	Longer than specific period	"P2VREFF"	Shorter than specific period	"VSS"	Within specified period	"HiZ"
TMAX detection result	TMAXoutput											
Longer than specific period	"P2VREFF"											
Shorter than specific period	"VSS"											
Within specified period	"HiZ"											
26	LPFN	I	Reverse input terminal for low pass filter amplifier.									
27	LPFO	O	Output terminal for low pass filter amplifier.									
28	PVREF	-	PLL system VREF terminal.									
29	VCOREF	I	VCO center frequency reference level terminal. To be fixed usually to "PVREF".									
30	VCOF	O	Filter terminal for VCO.									
31	AVSS	-	Analog system ground terminal.									
32	SLCO	O	Data slice level generation DAC output terminal.									
33	RFIN	I	RF signal input terminal.									
34	AVDD	-	Analog system power terminal.									
35	RFCT	I	RFRP signal center level input terminal.									
36	RFZI	I	RFRP zero cross input terminal.									
37	RFRP	I	RF ripple signal input terminal.									
38	FEIN	I	Focus error signal input terminal.									
39	SBAD	I	Sub-beam addition signal input terminal.									
40	TSIN	I	Test input terminal. To be fixed usually to "Vref"									
41	TEIN	I	Tracking error signal input terminal. (Fetching when tracking servo is ON)									
42	TEZI	I	Tracking error zero cross input terminal.									
43	FOO	O	Focus equalizer output terminal.									

Pin No.	Terminal name	I/O	Operation function	Remarks
44	TRO	O	Tracking equalizer output terminal.	
45	VREF	-	Analog reference power terminal.	
46	RFGC	O	RF amplitude adjustment control signal output terminal. Output of 3-pole PWM signal. (PWM carrier = 88.2 kHz)	
47	TEBC	O	Tracking balance control signal output terminal. Output of 3-pole PWM signal. (PWM carrier = 88.2 kHz)	
48	FMO	O	Feed equalizer output terminal. Output of 3-pole PWM signal. (PWM carrier = 88.2 kHz)	
49	FVO	O	Speed error signal or feed search EQ output terminal. Output of 3-pole PWM signal. (PWM carrier = 88.2 kHz)	
50	DMO	O	Disc equalizer output terminal. Output of 3-pole PWM signal. (PWM carrier = DSP system 88.2kHz, to be synchronized with PXO)	
51	2VREF	-		
52	SEL	O		
53	FOON	O		
54	DFCT	O		
55	SRCH	O		
56	SHC	O		
57	VDD	-		
58	VSS	-		
59	IO0	I/O	General use I/O port.	
60	IO1		It is possible to select the input port and output port according to command.	
61	IO2		In case of input port the terminal state (H/L) can be read with the read command.	
62	IO3		In case of output port the terminal state (H/L/HIZ) can be controlled with the command.	
63	/DMOUT		Terminal to set the mode to output dual value PWM of feed equalizer from the IO0,1 terminal and to output the dual value PWM from disc equalizer of IO2,3 terminal "L" Active.	
64	/CKSE		X'tal selection terminal. When 16.9344 MHz: "H" When 33.8688 MHz: "L"	
65	/DACT		Test terminal.	
66	TESIN		Test input terminal.	
67	TESIO1		Test input/output terminal.	
68	VSS		Digital ground terminal.	
69	PXI		DSP system clock oscillation circuit input terminal.	
70	PXO		DSP system clock oscillation circuit output terminal.	
71	VDD		Digital + power terminal.	
72	XVSS		Ground terminal for system clock oscillation circuit.	
73	XI		System clock oscillation circuit input terminal.	
74	XO		System clock oscillation circuit output terminal.	
75	XVDD		Positive power terminal for system clock oscillation circuit.	
76	DVDD	-	D/A converting section power terminal.	
77	RO	O	R channel data forward rotation output terminal.	
78	DVSS	-	D/A converting section analog ground terminal.	
79	DVR	-	D/A converting section reference voltage terminal.	
80	LO	O	L channel data forward rotation output terminal.	
81	DVDD	-	D/A converting section power terminal.	
82	TEST1	I	Test terminal. To be opened usually.	Pull-up resistor built in.
83	TEST2	I	Test terminal. To be opened usually.	Pull-up resistor built in.
84	TEST3	I	Test terminal. To be opened usually.	Pull-up resistor built in.
85	BUS0	I/O	Microcomputer interface data input/output terminal.	Schmidt input CMOS port
86	BUS1	I/O		
87	BUS2	I/O		

Pin No.	Terminal name	I/O	Operation function	Remarks															
88	BUS3	I/O																	
89	VDD	-	Digital + power terminal.																
90	VSS	-	Digital ground terminal.																
91	BUCK	I	Microcomputer interface clock input terminal.	Schmidt input															
92	/CCE	I	Microcomputer interface chip enable signal input terminal. BUS0 to 3 is active in "L" state.	Schmidt input															
93	TEST4	I	Test terminal. To be opened usually.	Pull-up resistor built in.															
94	/TEMOD	I	Local test mode selection terminal.	Pull-up resistor built in.															
95	/RST	I	Reset signal input terminal. Reset state: "L"	Pull-up resistor built in.															
96	TEST0	I	Test terminal. To be opened usually.	Pull-up resistor built in.															
97	/HSO	O	Playback speed mode flag output terminal.																
98	/UHSO	O	<table border="1"> <tr> <th>/UHSO</th> <th>/HSO</th> <th>Playback speed</th> </tr> <tr> <td>H</td> <td>H</td> <td>x1 speed playback</td> </tr> <tr> <td>H</td> <td>L</td> <td>x2 speed playback</td> </tr> <tr> <td>L</td> <td>H</td> <td>x4 speed playback</td> </tr> <tr> <td>L</td> <td>L</td> <td>x8 speed playback</td> </tr> </table>	/UHSO	/HSO	Playback speed	H	H	x1 speed playback	H	L	x2 speed playback	L	H	x4 speed playback	L	L	x8 speed playback	
/UHSO	/HSO	Playback speed																	
H	H	x1 speed playback																	
H	L	x2 speed playback																	
L	H	x4 speed playback																	
L	L	x8 speed playback																	
99	EMPH	O	Subcode Q data emphasis flag output terminal. Emphasis ON: "H" OFF: "L" Output polarity can be inverted by the command.																
100	LRCK	O	Channel clock (44.1 kHz) output terminal. L channel "L" R channel: "H" Output polarity can be inverted by the command.																

• Block Diagram



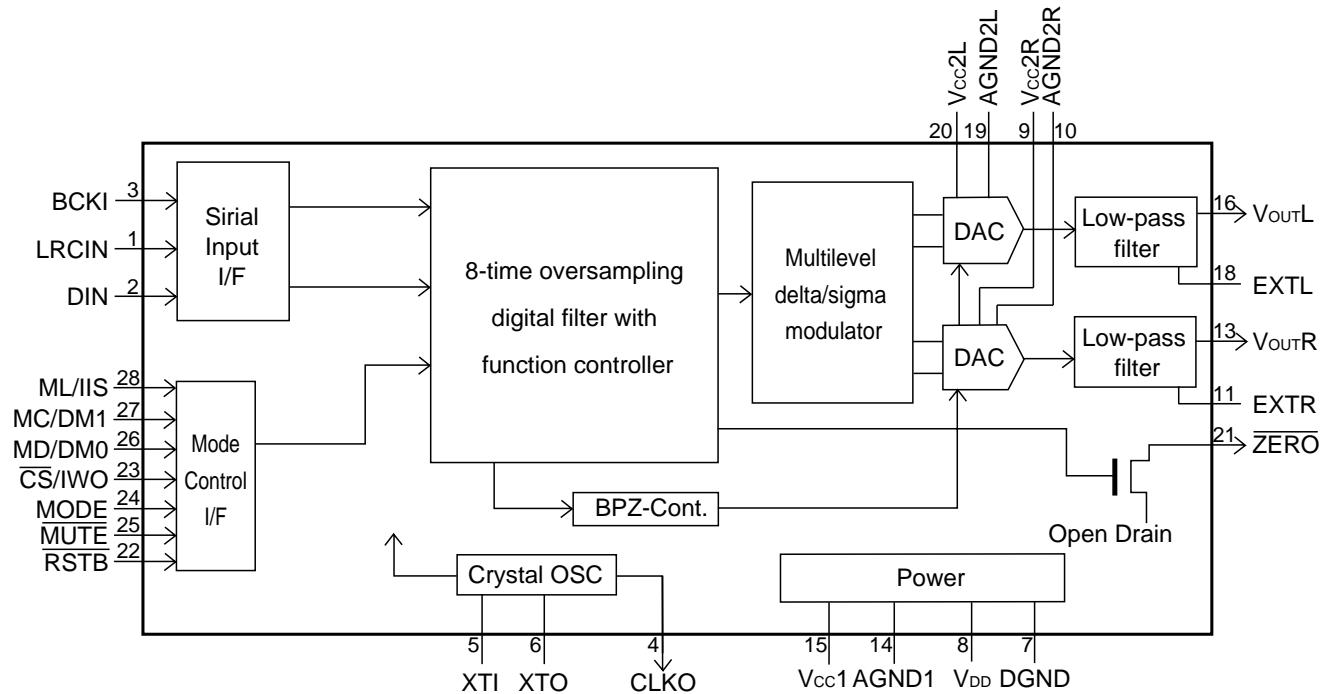
9-14. IC801 PCM1716E

AUDIO D/A CONVERTER

Pin No.	Terminal name	I/O	Operation function
1	LRCIN	I	LRCK clock input (fs) ⁽³⁾
2	DIN	I	Data input ⁽³⁾
3	BCKI	I	Bit clock input for data.
4	CLKO	O	System clock buffered output.
5	XTI	I	Connection of crystal oscillator or external clock input.
6	XTO	O	Connection of crystal oscillator
7	DGND	-	Digital GND
8	V _{DD}	-	Digital power +5V
9	V _{cc2R}	-	Analog power +5V
10	AGND2R	-	Analog GND
11	EXTR	O	Rch Analog output amp. • common
12	NC	-	Not connected.
13	V _{outR}	O	Rch Analog voltage output
14	AGND1	-	Analog GND
15	V _{cc1}	-	Analog power +5V
16	V _{outL}	O	Lch Analog voltage output
17	NC	-	Not connected.
18	EXTL	O	Lch Analog output amp. • common
19	AGND2L	-	Analog GND
20	V _{cc2L}	-	Analog power +5V
21	ZERO	O	Zero data • flag
22	RSTB	I	Resetting. While this pin is in "L" state, the DF and delta -sigma modulator is in reset state. ⁽¹⁾
23	CS/IWO	I	Chip selection/input format selection ⁽²⁾
24	MODE	I	Mode control selection (H: Software, L: Hardware) ⁽¹⁾
25	MUTE	I	Mute control ⁽¹⁾
26	MD/DM0	I	Mode control data/deemphasis selection 1 ⁽¹⁾
27	MC/DM1	I	Mode control BCK/deemphasis selection 2 ⁽²⁾
28	ML/IIS	I	Mode control latch/input format selection ⁽¹⁾

Note: (1) Pins 22, 24, 25, 26, 27, and 28: With Schmidt trigger input pull-up resistor (2) Pin 23: With Schmidt trigger input pull-down resistor
(3) Pins 1, 2, and 3: Schmidt trigger input

• Block Diagram

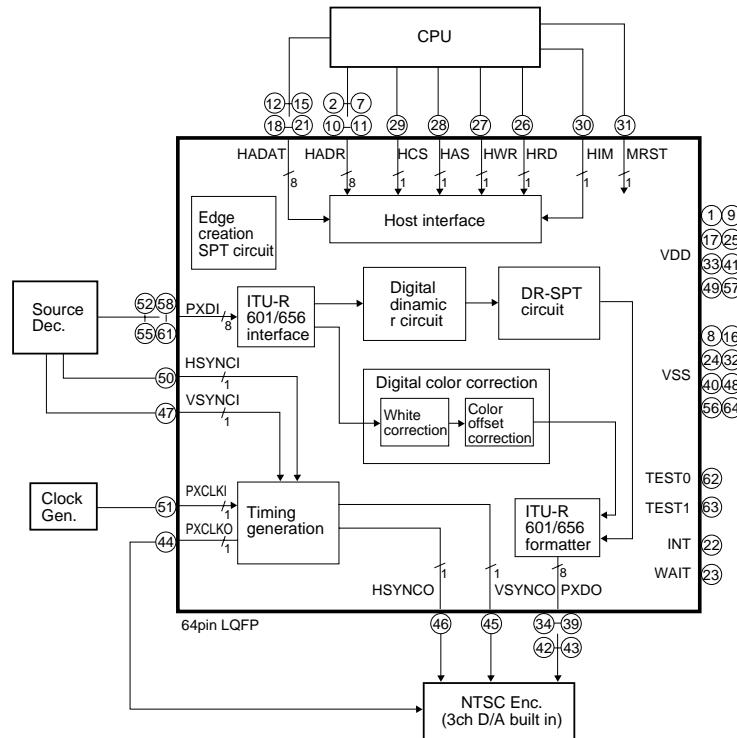


9-15. IC901 IX1516GE GAMMA S-P-TONE

Terminal	Terminal name	In/Output	Function
1	VDD	—	Digitam power +3.3V
2	HADR (0)	Input	CPU Address bus
3	HADR (1)	Input	CPU Address bus
4	HADR (2)	Input	CPU Address bus
5	HADR (3)	Input	CPU Address bus
6	HADR (4)	Input	CPU Address bus
7	HADR (5)	Input	CPU Address bus
8	VSS	—	Digital GND
9	VDD	—	Digitam power +3.3V
10	HADR (6)	Input	CPU Address bus
11	HADR (7)	Input	CPU Address bus
12	HADAT (0)	Input	CPU Data bus
13	HADAT (1)	Input	CPU Data bus
14	HADAT (2)	Input	CPU Data bus
15	HADAT (3)	Input	CPU Data bus
16	VSS	—	Digital GND
17	VDD	—	Digitam power +3.3V
18	HADAT (4)	Input	CPU Data bus
19	HADAT (5)	Input	CPU Data bus
20	HADAT (6)	Input	CPU Data bus
21	HADAT (7)	Input	CPU Data bus
22	INT	Input	CPU Data bus
23	WAIT	Input	CPU Data bus
24	VSS	—	Digital GND
25	VDD	—	Digitam power +3.3V
26	HRD	Input	CPU read signal
27	HWR	Input	CPU write signal
28	HAS	Input	CPU address strobe signal
29	HCS	Input	CPU tip select signal
30	HIM	Input	CPU bus control selection signal (I/M mode = H/L)
31	MRST	Input	Reset signal
32	VSS	—	Digital GND
33	VDD	—	Digital power +3.3V
34	PXDO (0)	Output	Pixel data output
35	PXDO (1)	Output	8-bit parallel video data conforming to ITU-R BT.601 and BT.656 standard (Cb/Y/Cr/Y)
36	PXDO (2)	Output	MSB=PXDO(7), LSB=PXDO(0)
37	PXDO (3)	Output	
38	PXDO (4)	Output	
39	PXDO (5)	Output	
40	VSS	—	Digital GND
41	VDD	—	Digital power +3.3V
42	PXDO (6)	Output	
43	PXDO (7)	Output	
44	PXCLKO	Output	Reference clock output for pixel data. 27 MHz
45	VSYNC0	Output	Vertical sync signal output
46	H SYNC0	Output	Horizontal sync signal output
47	V SYNC1	Input	Vertical sync signal output
48	VSS	—	Digital GND
49	VDD	—	Digital power +3.3V
50	H SYNC1	Input	Horizontal sync signal output
51	PXCLK1	Input	Reference clock output for pixel data. 27 MHz
52	PXDI (0)	Input	Pixel data output
53	PXDI (1)	Input	8-bit parallel video data conforming to ITU-R BT.601 and BT.656 standard (Cb/Y/Cr/Y)
54	PXDI (2)	Input	MSB=PXDI(7), LSB=PXDI(0)
55	PXDI (3)	Input	

Terminal	Terminal name	In/Output	Function
56	VSS	-	Digital GND
57	VDD	-	Digital power +3.3V
58	PXDI (4)	Input	
59	PXDI (5)	Input	
60	PXDI (6)	Input	
61	PXDI (7)	Input	
62	TEST0	Input	Test terminal
63	TEST1	Input	Test terminal
64	VSS	-	Digital GND

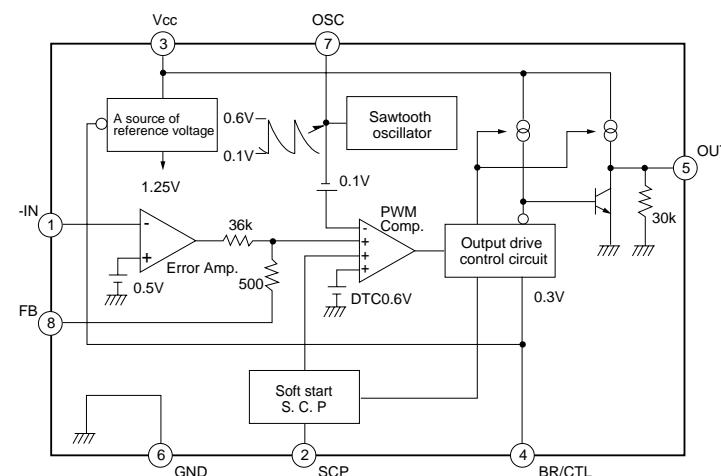
• Block Diagram



9-16. IC1000 MB3800PV

Pin No.	Terminal name	I/O	Operation function
1	-IN	I	Error amplifier inversion input terminal
2	SCP	-	Capacitor connection terminal for soft start/SCP setting
3	VCC	-	Power terminal
4	BR/CTL	I	Output current setting/control terminal
5	OUT	O	Totem pole type output terminal
6	GND	-	Ground terminal
7	OSC	-	Capacitor/resistor connection terminal for oscillation frequency setting
8	FB	O	Error amplifier output terminal

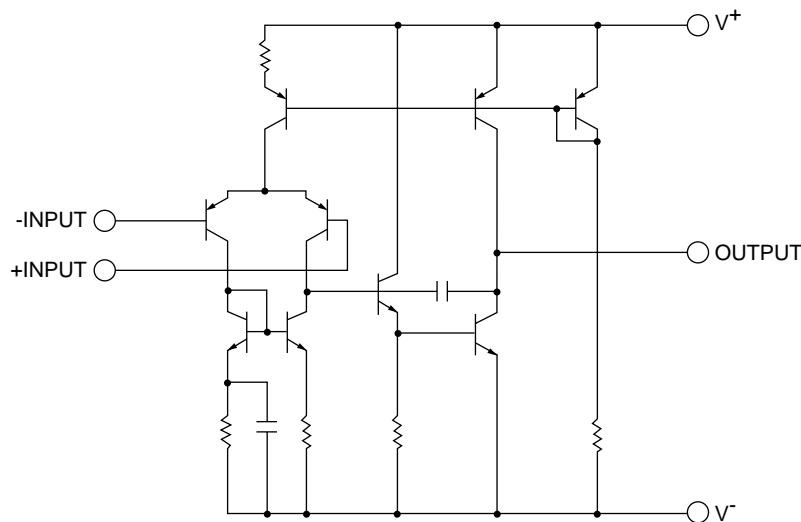
• Block Diagram



9-17. IC1101 LZ9GJ18/-1

Pin No.	Terminal name	Operation function	Pin No.	Terminal name	Operation function
1	VIN	Vertical sync signal input (positive polarity)	37	SPIO	Start signal input/output for source driver
2	CVOP	Vertical sync separation signal output	38	PDP	Phase comparison output
3	MON_E	Test setting output	39	GND	Ground power terminal
4	HSY	Horizontal sync signal input/output (negative polarity)	40	MON	Test setting output
5	VDD	Power terminal	41	GND	Ground power terminal
6	FRPT	Polarity inversion signal output for opposed polarity	42	GND	Ground power terminal
7	SYNI	Composite sync signal input	43	OSCO	Clock oscillation circuit output
8	FRPV	Polarity inversion signal output for video signal	44	OSCI	Clock oscillation circuit input/output
9	GND	Ground power terminal	45	VDD	Power terminal
10	VCS	Mask signal output for normal mode	46	GND	Ground power terminal
11	NTPC	Input for NTSC/PAL setting	47	CLD	Clock signal output for source driver
12	VSY	Vertical sync signal input/output	48	TST1	Test setting input
13	HRVC	Input for horizontal scanning direction setting	49	RESH	Horizontal counter reset input
14	VRVC	Input for vertical scanning direction setting	50	RESV	Vertical counter reset input
15	CLKC	Input for clock/sync signal input/output setting	51	TST2	Test setting input
16	MDS	Input for display mode setting	52	TEST	Test setting input
17	GND	Ground power terminal	53	MON_A	Test setting output
18	EXCL	Clock input/output	54	MON_B	Test setting output
19	GND	Ground power terminal	55	MON_C	Test setting output
20	MDW	Input for display mode setting	56	MON_D	Test setting output
21	MDN	Input for display mode setting	57	CLS	Clock signal output for gate driver
22	PWM	Backlight luminance control signal output	58	SPS	Reset signal output for gate driver
23	MON_F	Test setting output	59	VR	Scan setting input for gate driver
24	VSWC	VSWO output control input	60	MOD1	Control signal for gate driver
25	VSWI	Video system selection input	61	TCLK	Test setting input
26	VSWO	Video system selection output	62	GND	Ground power terminal
27	VDD	Power terminal	63	GND	Ground power terminal
28	SPOI	Start signal input/output for source driver	64	GPS	Signal output for gate power supply
29	GND	Ground power terminal	65	LOWI	Control signal input for gate driver
30	PCP	Test setting output	66	ABC	Input for output setting
31	CLOC	EXCL terminal output mode selection input	67	VDD	Power terminal
32	MOD2	Control signal output for gate driver	68	GND	Ground power terminal
33	HR	Horizontal scan setting output for source driver	69	DVTC	Test setting input
34	IHR	Horizontal scan setting output for source driver	70	BLKI	Both sides position adjustment input
35	PS	Control signal output for source driver	71	BLKO	Both sides position adjustment output
36	CTR	Control signal output for source driver	72	SYNO	Composite sync signal output

9-18. IC1102 NJM2107F

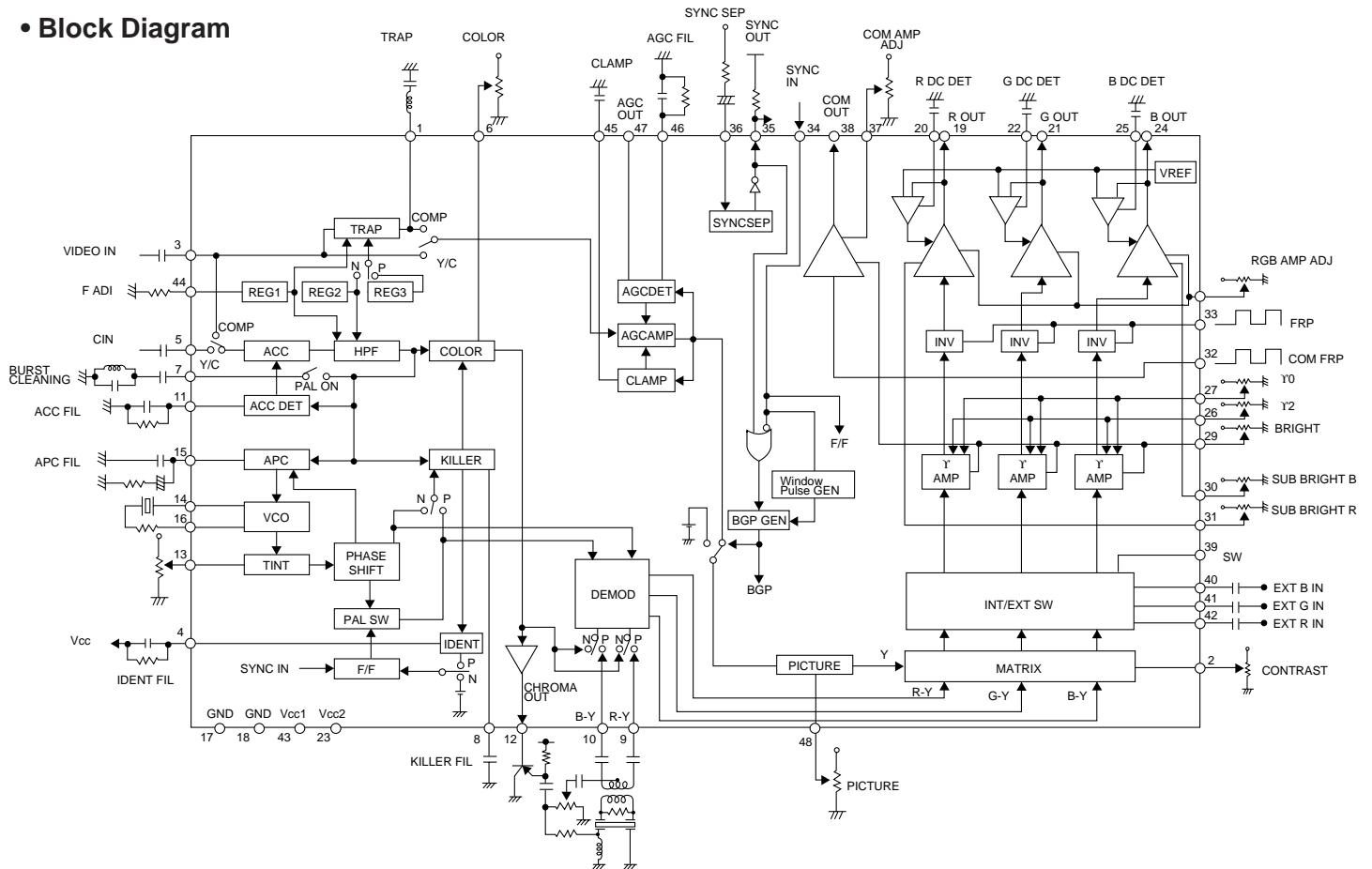


9-19. IC1801 IR3Y29BM

Pin No.	Terminal name	Operation function
1	TRAP	It is a trap connection terminal. Output impedance is $1k\Omega$.
2	CONTRAST	Adjustment can be done the signal contrast from the video input (Y/C input).
3	VIDEO IN	It is the input terminal of the composite video signal (in the case of the Y/C input, Y signal).
4	IDENT FILTER	It is a filter connection terminal for ident detection.
5	C IN	It is the input terminal of the chroma signal at the time of the y/c input. It comes to deal with composite video input when this terminal is articulated in GND again.
6	COLOR	It is a color adjustment terminal.
7	BURST OUT	A burst cleaning coil is articulated at the time of the PAL preference.
8	KILLER FILTER	It is the connection terminal of the filter for killer detection.
9	R-Y	It is the input terminal of the color difference demodulation circuit.
10	B-Y	
11	ACC FILTER	It is the connection terminal of the filter for the ACC detection.
12	CHROMA OUT	A collar is adjusted, and it is the output terminal of the chroma signal which went ahead of the burst.
13	TINT	It is a terminal for the hue adjustment. The transfer switch of NTSC/PAL is included, and it comes to deal with PAL by articulating it in GND.
14	VCO IN	It is the input terminal of VCO.
15	APC FILTER	It is the connection terminal of the filter for the APC detection.
16	VCO OUT	It is the output terminal of VCO.
17,18	GND1,2	GND1, GND2 aren't articulated inside the integrated circuit. Give me these terminals as the surely same electric potential.
20	R DC DET	It is the smoothing capacitor connection terminal of the feedback circuit for the RGB output DC level control.
22	G DC DET	
25	B DC DET	Employ the condenser which leakage is rare in for the high impedance.
19	R OUT	It is the output terminal of the RGB primary colors signal.
21	G OUT	
24	B OUT	
23	Vcc2	It is a power source connection terminal for the RGB Hara output.
26	GAMMA 2	Adjustment can be done the point of the gamma 2. This terminal is preset inside.
28	RGB AMPLITUDE ADJUST	Adjustment can be done between black-black of the RGB output signal the swing and the dynamic range. This terminal is preset inside.
27	GAMMA 0	Adjustment can be done the point of the gamma 0. This terminal is preset inside.
29	BRIGHT	A gamma compensation curve and the adjustment of the swing of common output can be done.
30	SUB BRIGHT B	It interlocks with the gamma compensation curve, and R and the slight adjustment of bright of B can be done.
31	SUB BRIGHT R	This terminal is preset inside.
32	COMMON FRP	It is the input terminal of the timing pulse for level switching of the COMMON output.
33	FRP	It is the input terminal of the timing pulse for the RGB output inversion. It is inverted with L, and it becomes non-inverting with H.
34	SYNC IN	It is the input terminal of low active horizontal synchronizing. A flip-flop is inverted at the time of PAL at the start of this synchronizing signal.
35	SYNC OUT	High active, and the composite synchronizing signal isolated in the synchronous separation circuit is outputted. An output form is open collector.
36	SYNC SEP	It is a synchronous separation circuit input terminal.
37	COMMON AMPLITUDE ADJUST	The adjustment of the COMMON signal amplitude can be done. This terminal is preset inside.
38	COMMON OUT	It is the output terminal of the COMMON signal.
39	SW	It is a SW signal input terminal whether to display either RGB input or video input. 'H' Or, it is open, and video input (Y/C input) is chosen in the RGB input, 'L'.
40	B IN	It is the input terminal of the RGB signal.
41	G IN	Input a signal by the capacitive coupling.
42	R IN	
43	Vcc	It is a power source connection terminal.
44	F ADJ	The characteristics of the built-in filter can do adjustment by the value of the backlash articulated in this terminal. $18k\Omega$ is recommended with both NTSC and PAL. Give me articulated backlash as the resistance value tolerance $\pm 2\%$, temperature characteristic $\pm 200ppm/\text{ }^{\circ}\text{C}$.
45	CLAMP	It is the connection terminal of the capacity for the pedestal clamp of the luminance signal. Employ the condenser which leakage is rare in for the high impedance.
46	AGC FILTER	It is the connection terminal of the filter for the automatic gain control detection of the luminance signal.

Pin No.	Terminal name	Operation function
47	AGC OUT	It is the terminal which the voltage detected in the automatic gain control detector circuit of the luminance signal is outputted in. Output voltage rises the output voltage.
48	PICTURE	The frequency characteristic of the luminance signal can do adjustment. When a voltage is lowered, emphasis is put on the contour.

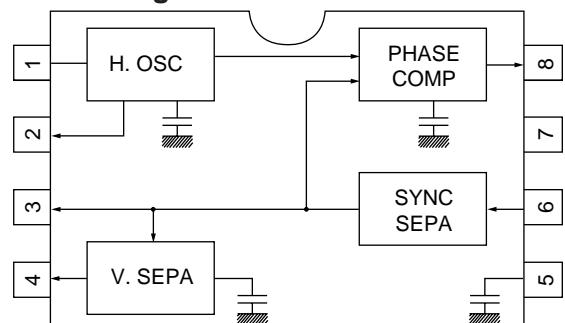
• Block Diagram



9-20. IC1900 BA7046F

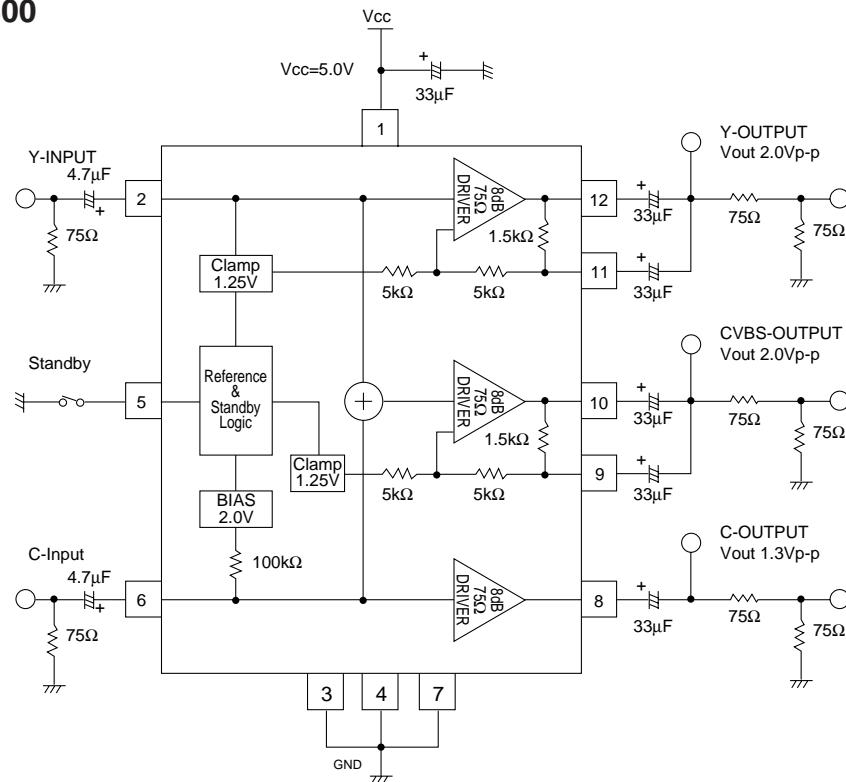
Pin No.	Function
1	A horizontal oscillation backlash terminal
2	HD output terminal
3	SYNC output terminal (Open Collector)
4	VD output terminal
5	GND terminal
6	Video input terminal
7	Power terminal
8	Phase comparator output terminal

• Block Diagram



9-21. IC2102 TK15400

• Block Diagram



9-22. IC3200 IX1625GE

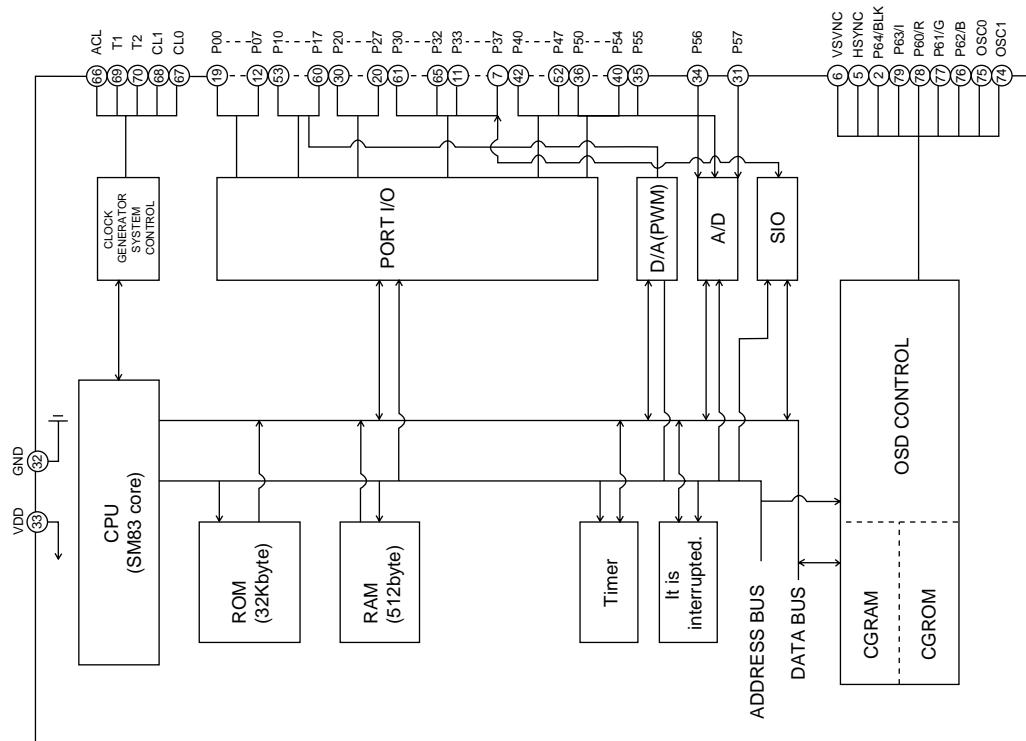
Pin No.	I/O	Terminal name	Operation function	Remarks
1	-	NC		
2	O	BLK	Blanking signal output	To LCD decoder IC
3				
4	-	NC		
5	I	H SYNC	Horizontal sync signal input	From LCD decoder IC
6	I	V SYNC	Vertical sync signal input	From LCD decoder IC
7	I	SCLK	Serial clock input	From DVD system computer
8	O	SOUT	Serial data output	To DVD system computer
9	I	SIN	Serial data input	From DVD system computer
10	I	SYNC	Composite sync signal input	From LCD decoder IC
11	I	PLL D	TVPLL lock signal input	From TV tuner
12	O	PLCS	TVPLL load EN output	To TV tuner
13	O	PCLK	Clock output for inner communication	To TV tuner, E ² PROM, and DAC IC
14	O	POUT	Data output for inner communication	To TV tuner, E ² PROM, and DAC IC
15	I	SAFE	Not used. "H"	
16	O	RGB	Not used. "L"	
17	O	MICS	READY output	From DVD system computer
18	O	POW	Power on/off control output	To DCDC converter
19	I	PIN	Data input for inner communication	From E ² PROM
20	O	K3	Not used.	
21	-	NC		
22	O	K2	Key matrix output2	To operation panel
23				
24	O	NC		
25	I	K1	Key matrix output1	
26	I	K0	Key matrix output0	
27	I	S3	Key matrix input3	
28	I	S2	Key matrix input2	
29	I	S1	Key matrix input1	
30	I	S0	Key matrix input0	

Pin No.	I/O	Terminal name	Operation function	Remarks
31	I	ST/MT	Input for destination setting	L: Japan
32	-	GND		GND
33	-	NC	Not used. (Pull-up)	
34	O	MONO	Not used.	
35	I	AFTT	AFT voltage inputFrom LCD decoder IC	From TV tuner
36	O	PDET	Battery monitor AD input	
37	I	AGC	AGC voltage input	From TV tuner
38	I	VOL	Not used.	
39	I	POW IN	Power button input	
40	I	IREM	Remote control input	From remote control light receiving unit
41	-	NC		
42	O	MODW	Panel selection output (1)	To LCD control IC
43		MODN	Panel selection output (2)	
44	O	VSW	Not used.	
45	O	MIRST	DVD microcomputer reset output	To DVD system computer interface IC
47	O	DVD P	DVD circuit power control	To DVD power switch circuit
48	I	LCD SW	Liquid crystal panel open/close interrupt	From liquid crystal open/close detection switch
49	O	LCD H	Backlight ON/OFF control	From E ² PROMTo liquid crystal inverter unit
50	-	NC		
51	-	NC		
52	O	LED1	LED control (green)	To LED lighting circuit
53	O	AV-S	TD/DVD video/audio selection output	To video SW IC/audio SW IC
54	O	LED2	LED control (red)	To LED lighting circuit
55	O	AV-P	TD/DVD video/audio selection output	To video SW IC/audio SW IC
56	O	DEF	Defeat output	
57	O	EPCS	E ² PROM chip select	To E ² PROM
58	O	DACS	DAC chip select	To adjustment DAC IC
59	O	FLOF	Not used.	
60	O	IN H	External input control	To video SW IC/audio SW IC
61	I	PSW	Not used.	
62	O	SMUTE	Audio mute output	To audio output circuit
63				
64	-	NC		
65	O	PMUTE	Video mute output	To LCD decoder circuit
66	I	ACL	ACL input	From 2VREG/reset generation IC
67	-	CLI	System clock input	Oscillator
68	-	CLO	System clock output	Oscillator
69		T1	Test input1	GND
70		T2	Test input2	GND
71	-	GND	Reference potential	GND
72	-	GND	Reference potential	GND
73	-	VDD	Power supply	4.5~5.5V
74	-	OSCI	Sign clock input	To OSD oscillation coil
75	-	OSCO	Sign clock output	To OSD oscillation coil
76		B	Blue sign output	To LCD decoder IC
77		G	Green sign output	To LCD decoder IC
78		R	Red sign output	To LCD decoder IC
79		FMCS	Not used.	
80	-	NC.		

Pin No.	I/O	Terminal name	Operation function	Remarks
2	O	BLK	Blanking signal output	H ... OSD display L ... Blank (television image)
3				
5	I	H SYNC	Horizontal sync signal input	Negative polarity input
6	I	V SYNC	Vertical sync signal input/Negative polarity input	
7	I	SCLK	Serial clock input/output	Clock input during serial communication with DVD microcomputer
8	O	SOUT	Serial data output	Data output during serial communication with DVD microcomputer
9	I	SIN	Serial data input	Data input during serial communication with DVD microcomputer
10	I	SYNC	Composite sync signal input	Used for sync judgment in the search mode.
11	I	PLL	TVPLL lock signal input*	Used to judge whether TVPLL is locked in the receiving frequency or not. H ... Unlocked state L ... Locked state
12	O	PLCS	TVPLL load EN output*	H ... During data transmission to TVPLL L ... When data is not transmitted.
13	O	PCLK	Clock output for inner communication	Serial clock output to E ² PROM/TVPLL*/DAC
14	O	POUT	Data output for inner communication	Serial data output to E ² PROM/TVPLL*/DAC
15	I	SAFE		Fixed at "H".
16	O	RGB		Fixed at "L".
17	O	MICS	READY output	READY signal output during serial communication with DVD H ... Command reception disable (BUSY state) L ... Command reception enable (READY state)
18	O	POW	Power on/off control	DC/DC power control H ... Power ON L ... Power OFF (stand-by)
19	I	PIN	Data output for inner communication	Serial data input to E ² PROM
20	O	K3	Not used.	
22	O	K2	Key matrix output2	Key matrix input
23				
25	O	K1	Key matrix output1	
26	O	K0	Key matrix output0	
27	I	S3	Key matrix input3	
28	I	S2	Key matrix input2	
29	I	S1	Key matrix input1	
30	I	S0	Key matrix input0	
31	I	ST/MT	Input for US setting	H ... US, L ... Japan
34	O	MONO	Not used.	
36	O	PDET	AD input for battery monitor	
39	O	POW IN	Power button input	H ... Power ON L ... Power OFF
35	I	AFTT	AFT voltage input*	Tuner AFT voltage input
37	I	AGC	AGC voltage input*	Tuner AGC voltage input
38	I	VOL	Sound volume AD input	Sound VOL input
40	I	R/C	Remote control input	Infrared remote control input
42	O	MODW	Panel selection input(1)	MODW MODN Display mode H H Full-screen mode H L Wide mode L H Normal mode L L Cinema mode
43				
44		MODN	Panel selection input(2)	
45	O	VSW	Not used.	
46	O	MIRST	DVD microcomputer reset output	H ... Normal, L ... Reset
47	O	DVD P	DVD circuit power control	H ... ON, L ... OFF
48	O	LCDSW	Liquid crystal panel open/close interrupt	H ... OPEN, L ... CLOSE
49	O	LCDH	Liquid crystal system circuit power control	H ... ON, L ... OFF

Pin No.	I/O	Terminal name	Operation function	Remarks
52	O	LED1	LED control (green)	LED control
53	O	AV S	DVD/TV control	"H" is output during TV tuner reception.
54	O	LED2	LED control (red)	LED control
55	O	AV P	DVD/TV control	"H" is output during TV tuner reception and external input.
56		DEF	Defeat output	H ... External synchronization (normal) L ... Internal synchronization (in the auto preset mode/during OSC adjustment)
57	O	EPCS	EPROM chip select	H ... During data transmission/reception with E ² PROM L ... When data is not transmitted.
58	O	DACS	DAC chip select	H ... During data transmission to DAC L ... When data is not transmitted.
59	O	FLOF	DVD video mute	H ... Normal L ... DVD video mute
60	O	IN H	External input control	H ... External input, L ... DVD/TV mode
61	I	PSW	Not used.	
62	O	SMUTE	Audio mute output	L ... Speaker sound mute H ... Normal
63				
65	O	PMUTE	Video mute output	L ... Video mute H ... Normal
79	O	FMCS	Not used.	

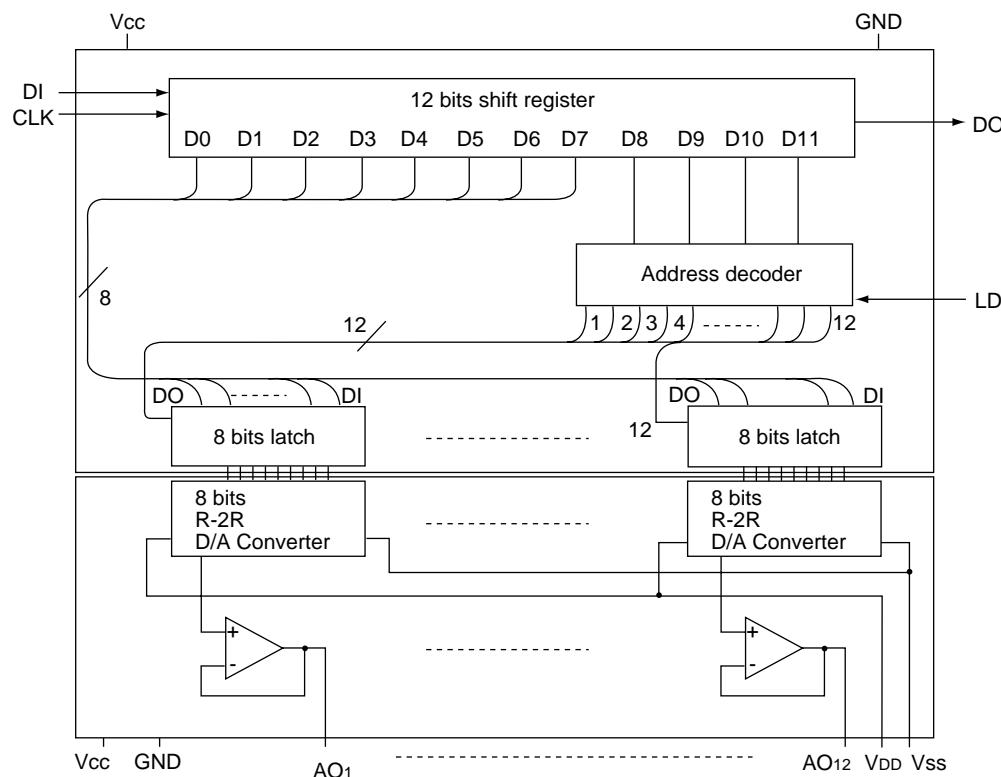
• Block Diagram



9-23. IC3201 MB8346BV

Pin No.	I/O	Terminal name	Remarks
17	I	Data input terminal	The 12-bit serial data is input.
14	O	Data output terminal	The bit data of MSB of 12-bit shift register is output.
16	I	Shift clock input terminal	The input signal from the DI terminal is input into 12-bit shift register when the shift clock rises.
15	I	Load signal input terminal	When "H" level is input, the data of the 12-bit shift register is loaded to the decoder and register for D/A output.
18, 19, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13	O	D/A output terminal	Analog data of 8-bit D/A converter with OP amplifier is output.
11	-	Power terminal	Power terminal of MCU interface/OP amplifier
20	-	GND terminal	Ground terminal of MCU interface/OP amplifier
10	-	Power terminal	Power terminal of D/A converter
1	-	GND terminal	Ground terminal of D/A converter

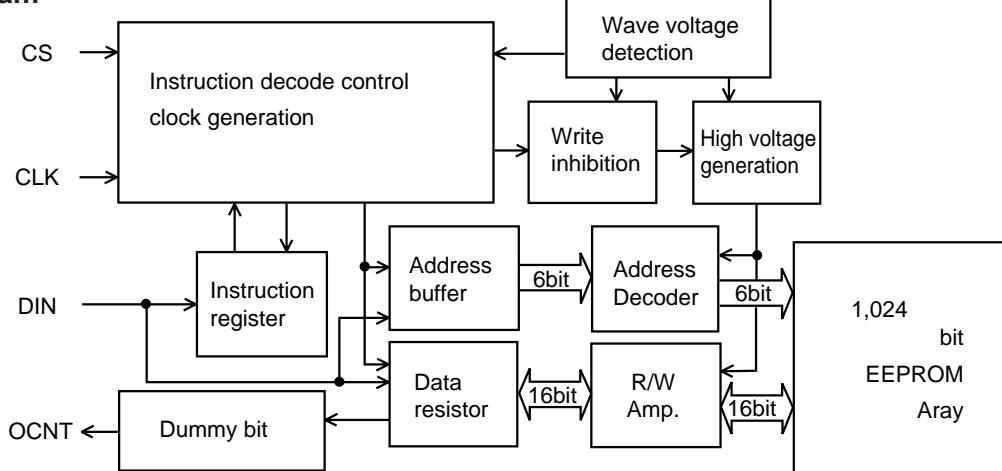
• Block Diagram



9-24. IC3202 BR93L46F

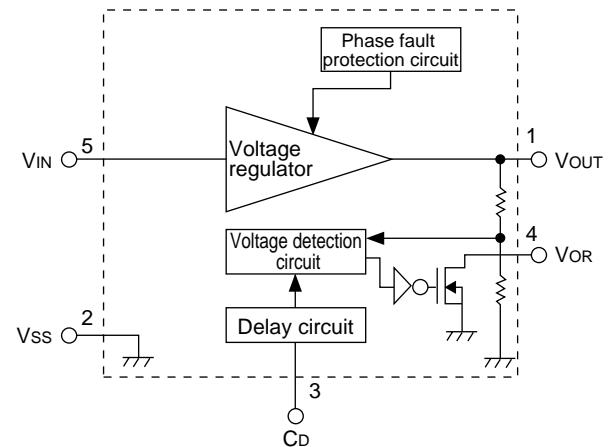
Terminal	Terminal name	In/Output	Function
2	VCC	—	Power
7	GND	—	All input/output reference voltage, 0V
3	CS	Input	Tip select input
4	CLK	Input	Sirial clock input
5	DIN	Input	Start bit, operation code, address and serial data input
6	OCNT	Output	Serial data output, READY/BUSY internal status indication output

• Block Diagram

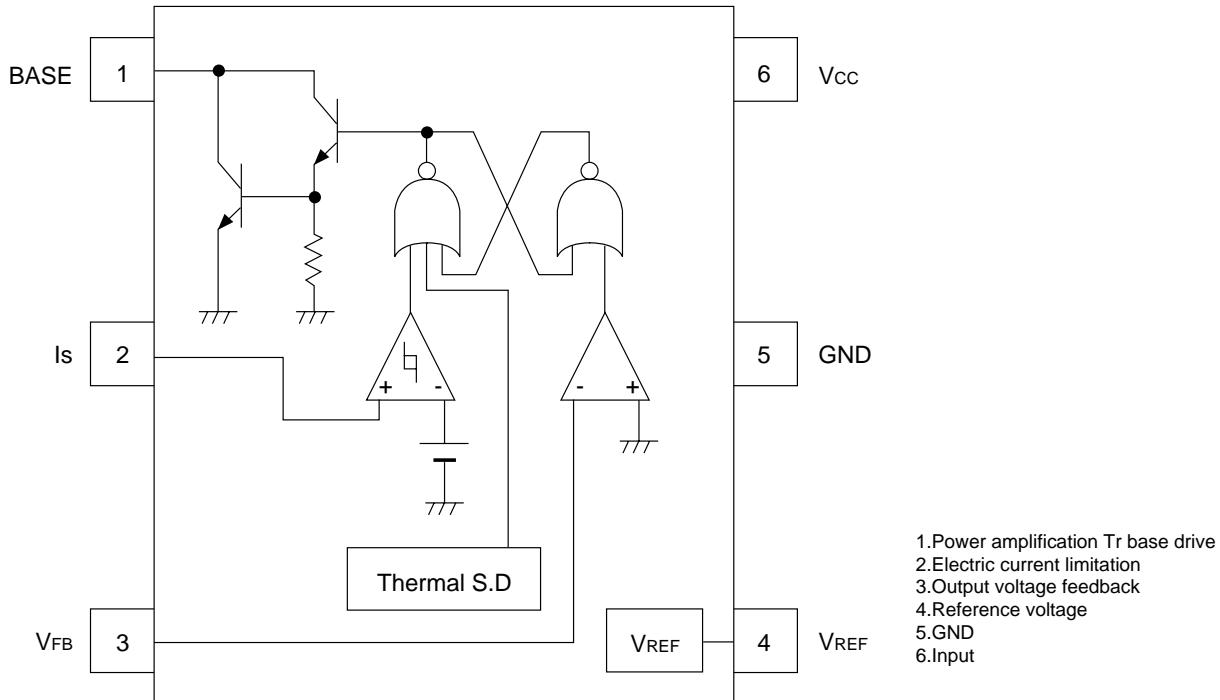


9-25. IC3205 S875045B

Pin No.	Terminal name	Remarks
1	V_{OUT}	Output terminal of voltage regulator
2	V_{ss}	GND terminal
3	C_D	External capacitor connection terminal for delay of voltage detection circuit
	$\overline{V_{PF}}$	Power-off circuit input terminal
	SENSE	Voltage monitor terminal of voltage detection circuit
4	V_{OR}	Output terminal of voltage detection circuit, Nch open drain
5	V_{IN}	Positive power input terminal



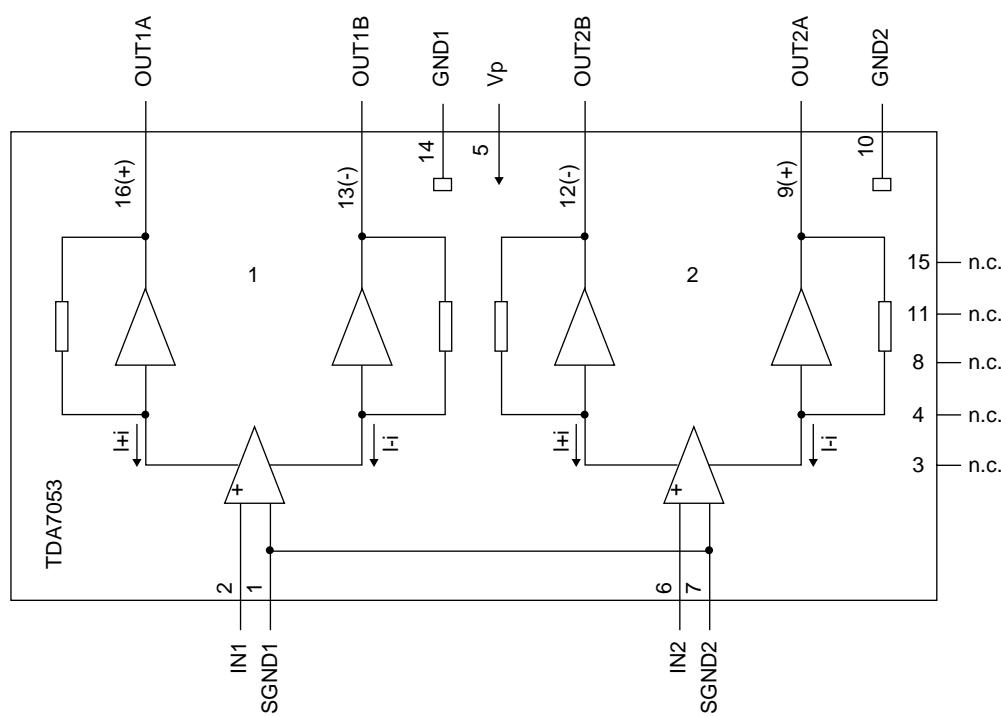
9-26. IC3601 TK11835



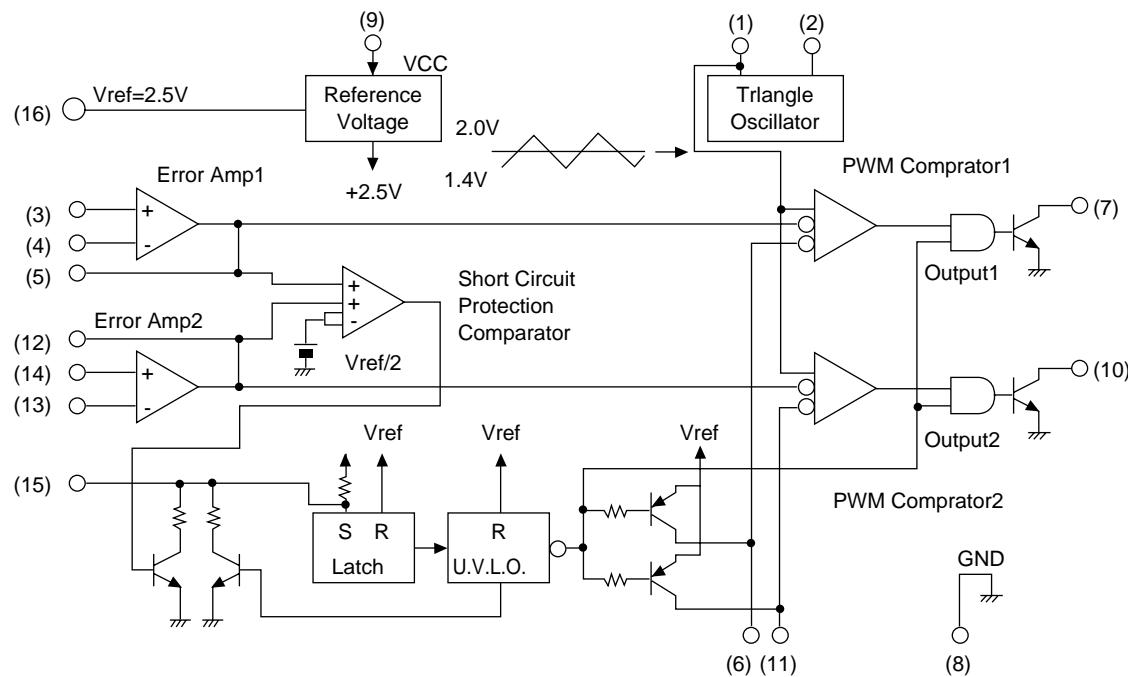
9-27. IC6002 TDA7053

Pin No.	Terminal name	Operation function	Pin No.	Terminal name	Operation function
1	SGND1	Signal ground1	9	OUT2A	Output2 (Positive)
2	IN1	Input1	10	GND2	Power ground2
3	n.c.	Not connected	11	n.c.	Not connected
4	n.c.	Not connected	12	OUT2B	Output2 (Negative)
5	Vp	Supply voltage	13	OUT1B	CH2 gain fixed input terminal
6	IN2	Input2	14	GND1	CH3 gain adjustment input terminal
7	SGND2	Signal ground2	15	n.c.	Not connected
8	n.c.	Not connected	16	OUT1A	VCC

- Block Diagram



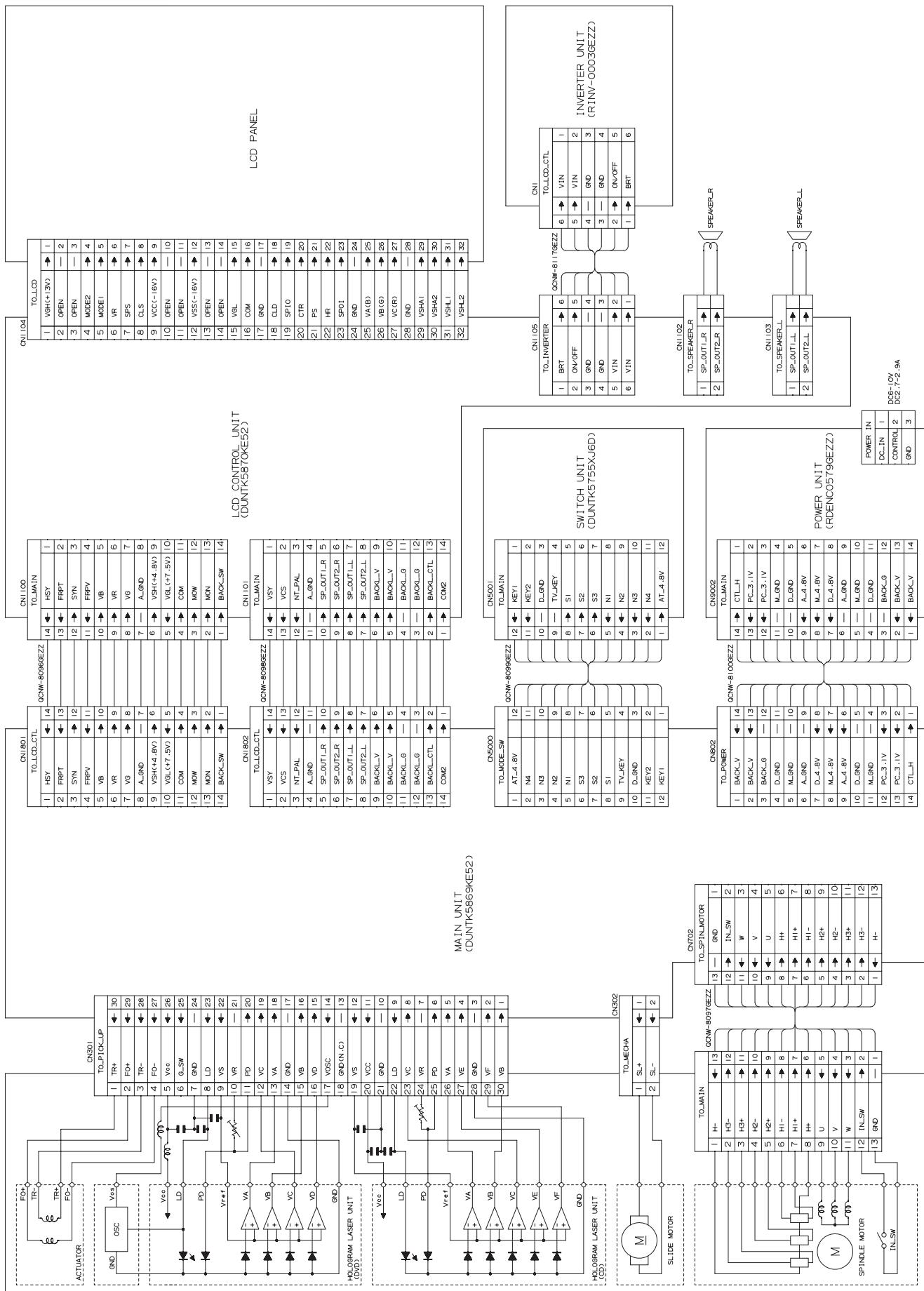
9-28. IC9001 TL1451AC



10. SEMICONDUCTOR LEAD IDENTIFICATION

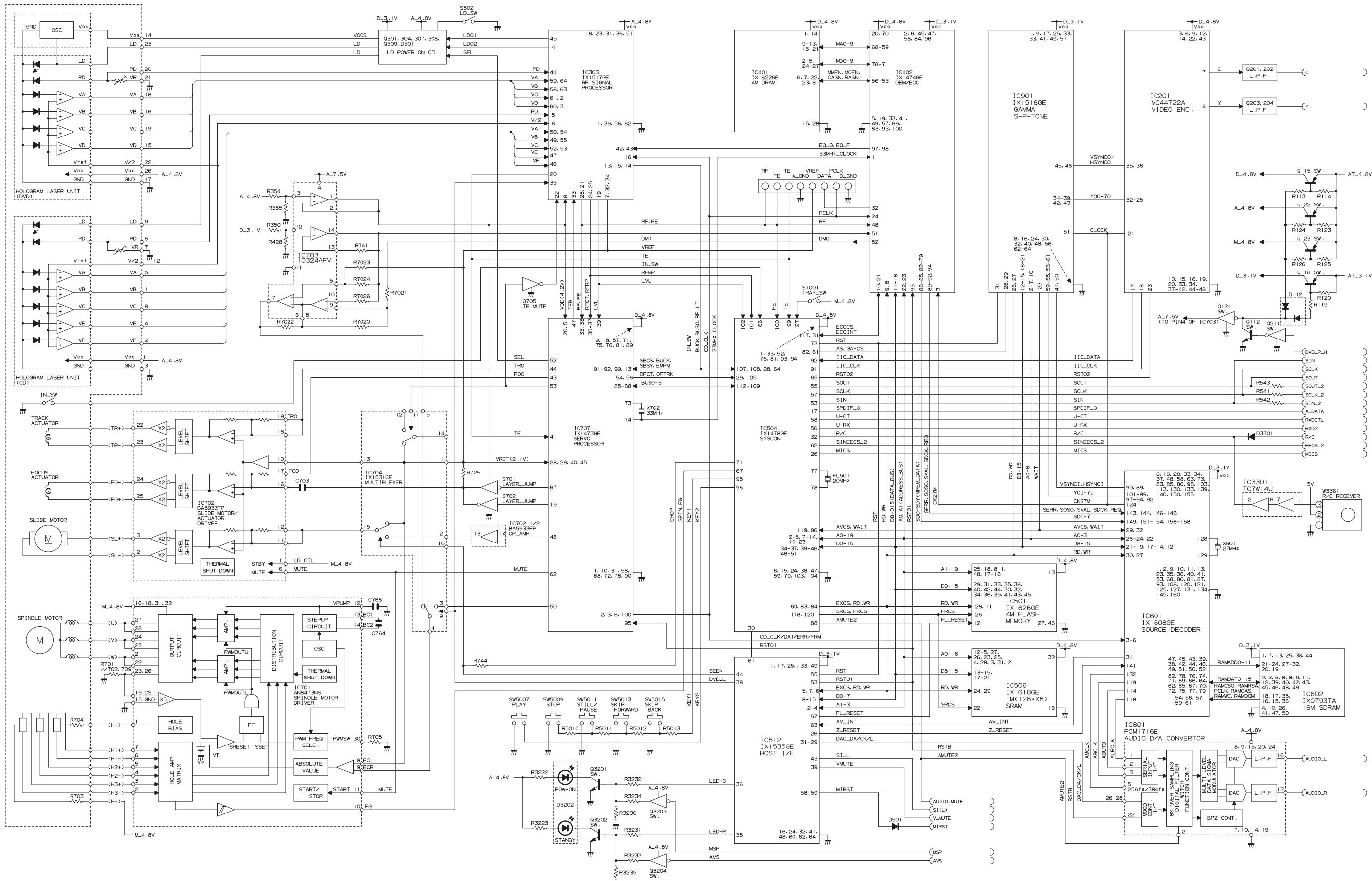
	IC701 VHiAN8473NS-1		IC6002 VHiTDA7053/-1		IC601 RH-iX1608GEZZ
	IC1901 VHiTHC221AF-1		IC702 VHiBA5933FP-1		IC801 VHiPCM1716E-1
	IC9001 0DLTL1451ACPW		IC401 RH-iX1622GEZZ		IC201 VHiMC44722A-1
	IC501 RH-iX1626GEZZ		IC303 RH-iX1517GEZZ		IC707 RH-iX1473GEZZ
	IC2102 VHiTK15400/-1		IC402 RH-iX1474GEZZ		X601 RCRSC0031GEZZ
	IC3201 VHiMB8346BV-1		IC504 RH-iX1478GEZZ		X702 RCRSC0035GEZZ
	IC703 VHi10324AFV-1		IC403 RH-iX1474GEZZ		X1801 RCRSC0087TAZZ
	IC506 RH-iX1618GEZZ		IC2101 VHiNJM2535V-1		IC6202, IC6203 VHiTC4053BF1E
	IC3202 VHiBR93L46F-1		IC512 RH-iX1535GEZZ		IC704 RH-iX1531CEZZ
	IC1900 VHiBA7046F/-1		IC504 RH-iX1478GEZZ		IC2100 VHiMB3800PV-1
	IC1101 VHiLZ9GJ18/-1		IC901 RH-iX1516GEZZ		IC3301 VHiTC7W14U/-1
	IC602 RH-iX0793TAZZ		IC512 RH-iX1535GEZZ		IC6602, IC1103, IC6000 VHiNJM4560M-1
	IC1902 VHiTC4S81F/-1		IC1801 VHiR3Y29BM-1		IC3200 RH-iX1625GEN2
	IC1102 VHiNJM2107F-1		IC1903 VHiTC4S66F/-1		IC6601 VHiPQ20WZ11-1
	IC3601 VHiTK11835/-1		IC2103 VHiTC4S66F/-1		IC3205 VHiS875045B-1

11. WIRING DIAGRAM

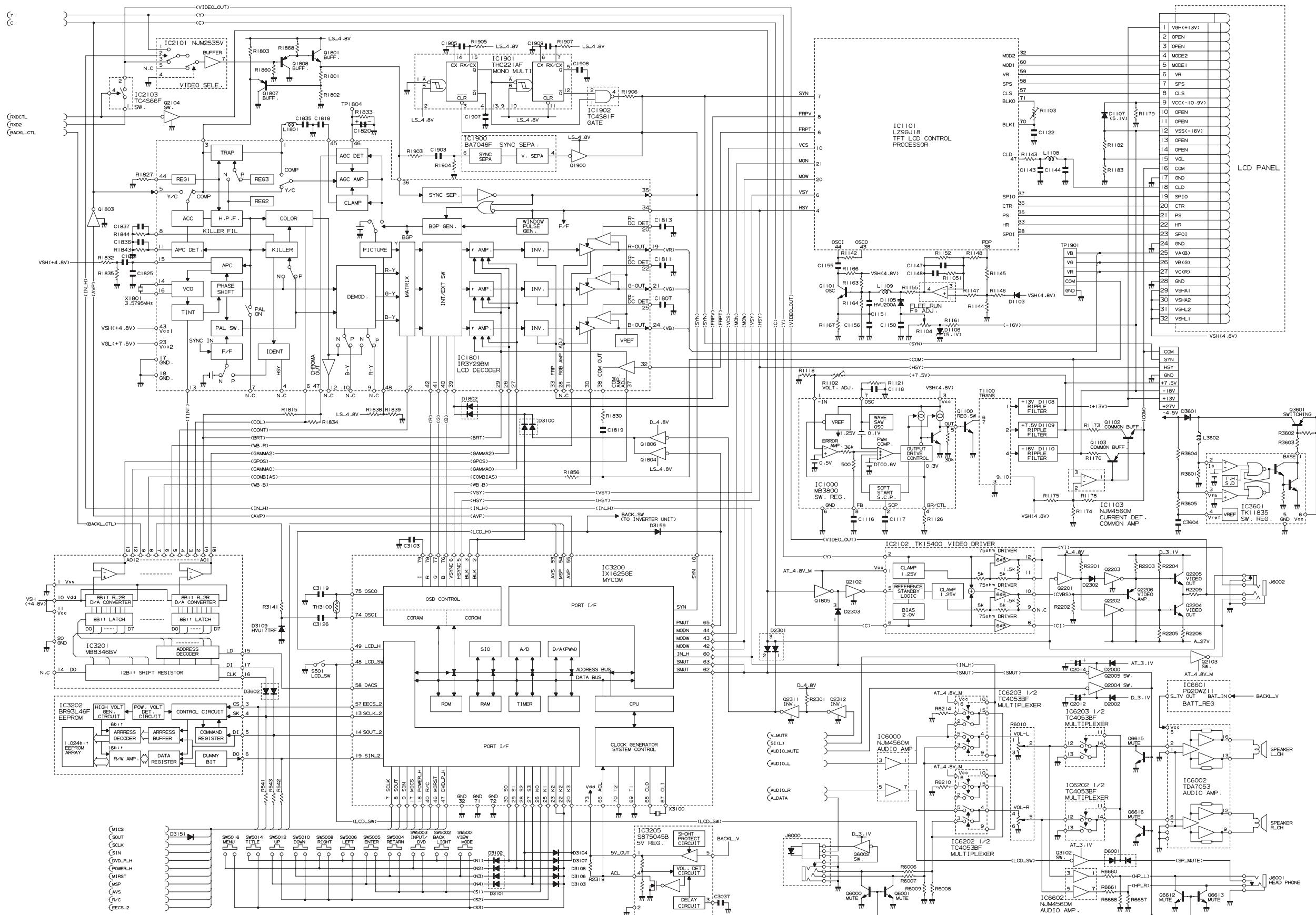


12. BLOCK DIAGRAMS

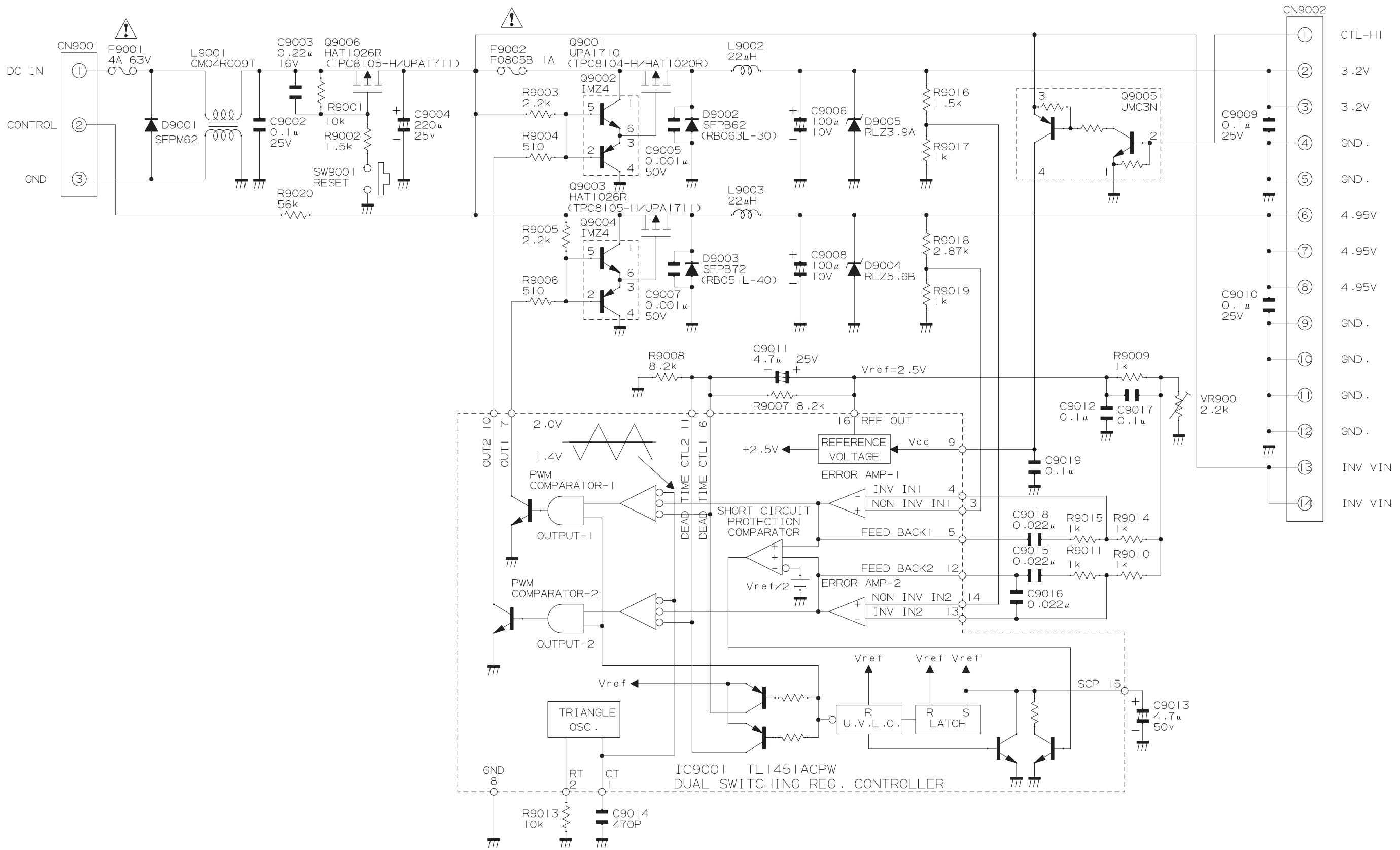
12-1. MAIN BLOCK DIAGRAM



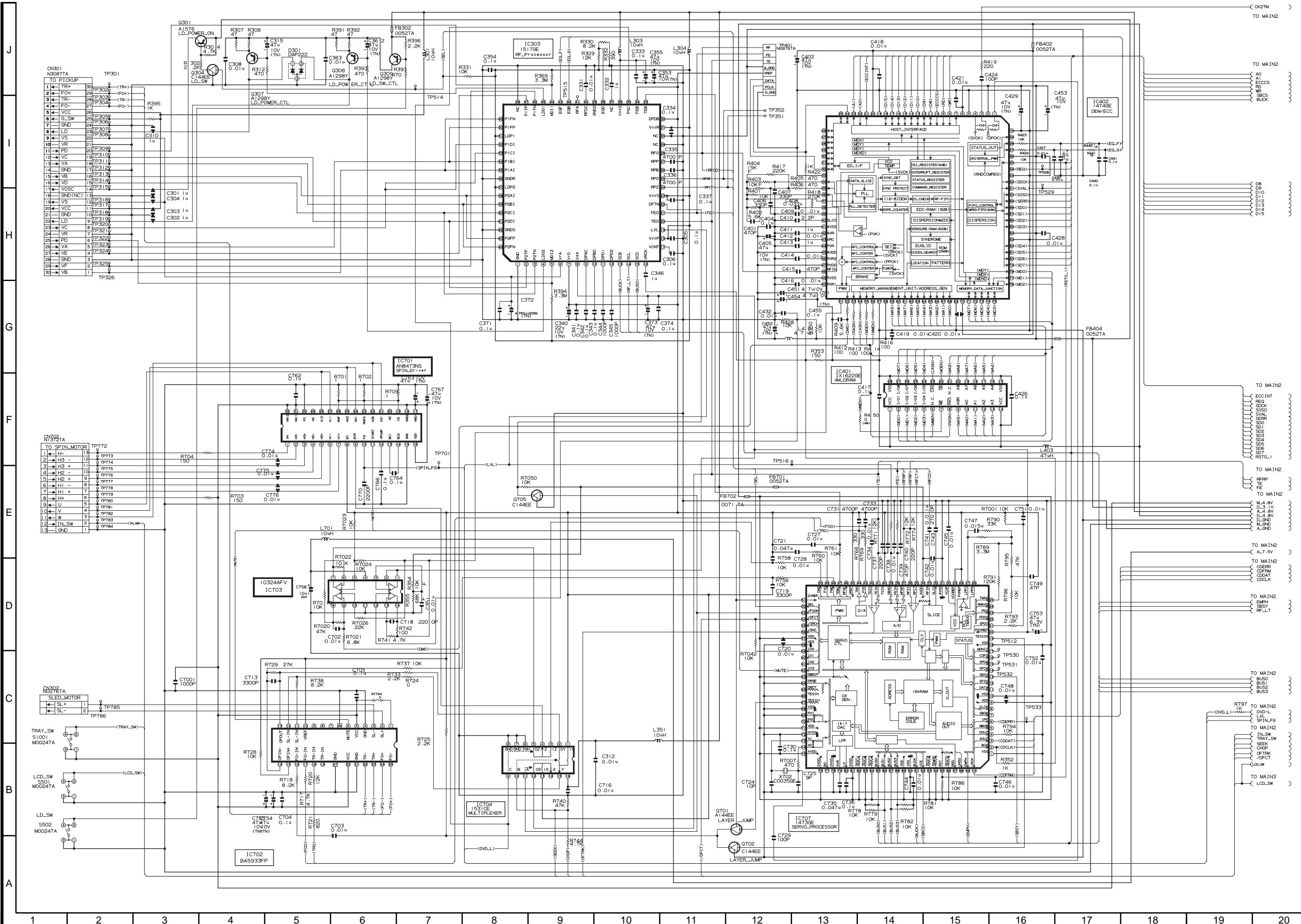
12-2. LCD BLOCK DIAGRAM



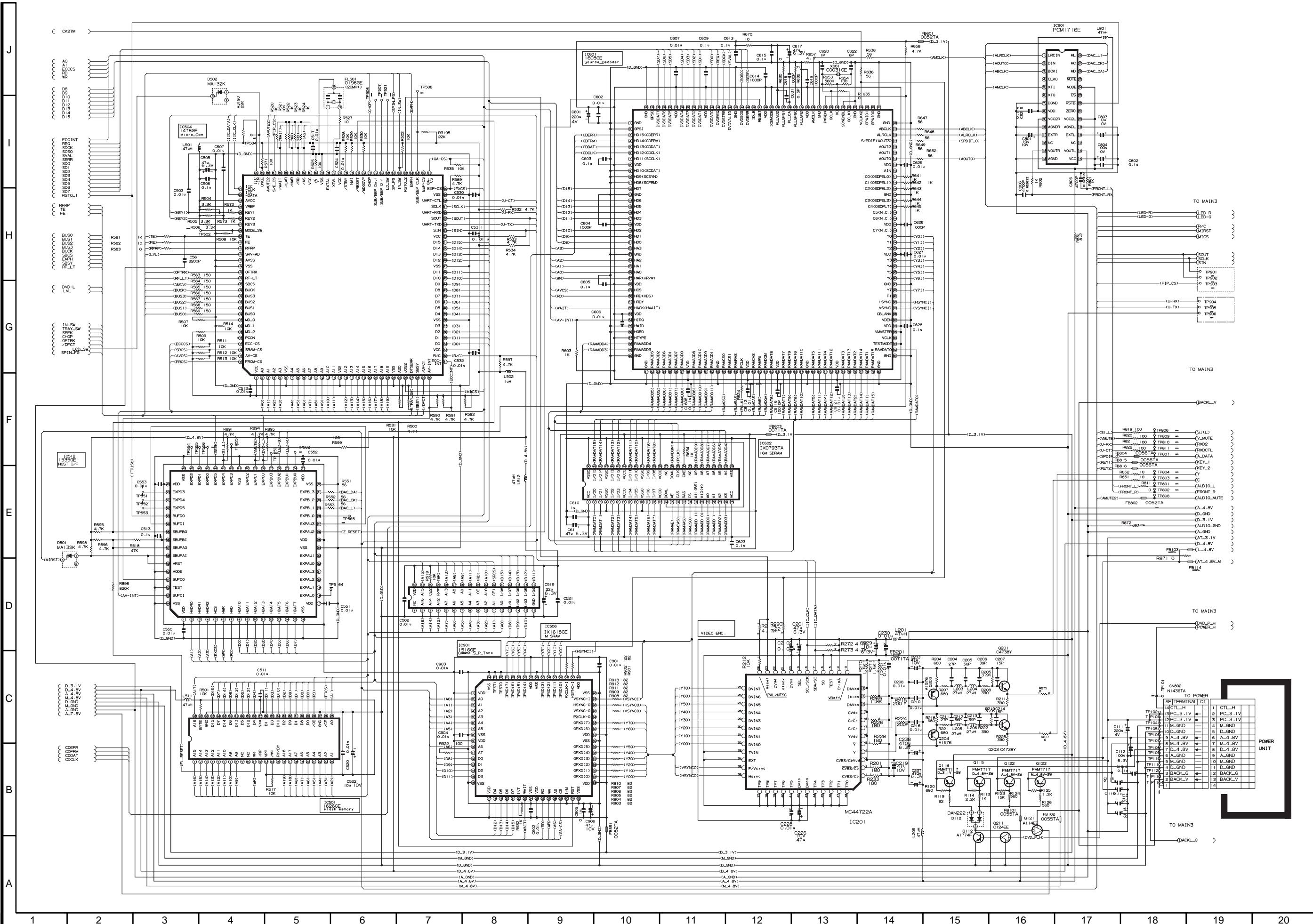
12-3. DC/DC CONVERTER BLOCK DIAGRAM



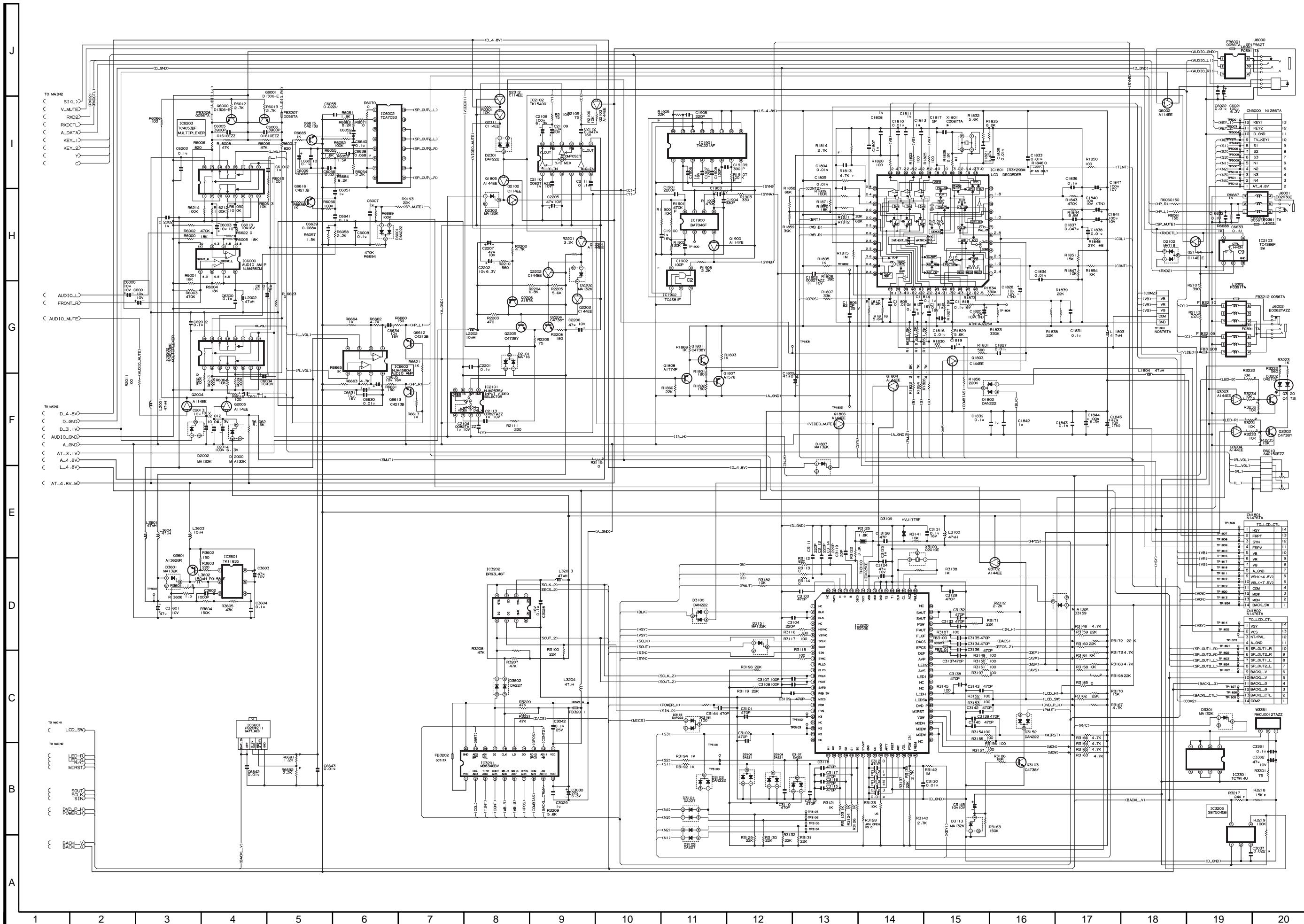
13. SCHEMATIC DIAGRAMS 13-1. MAIN (1) CIRCUIT SCHEMATIC DIAGRAM



13-2. MAIN (2) CIRCUIT SCHEMATIC DIAGRAM

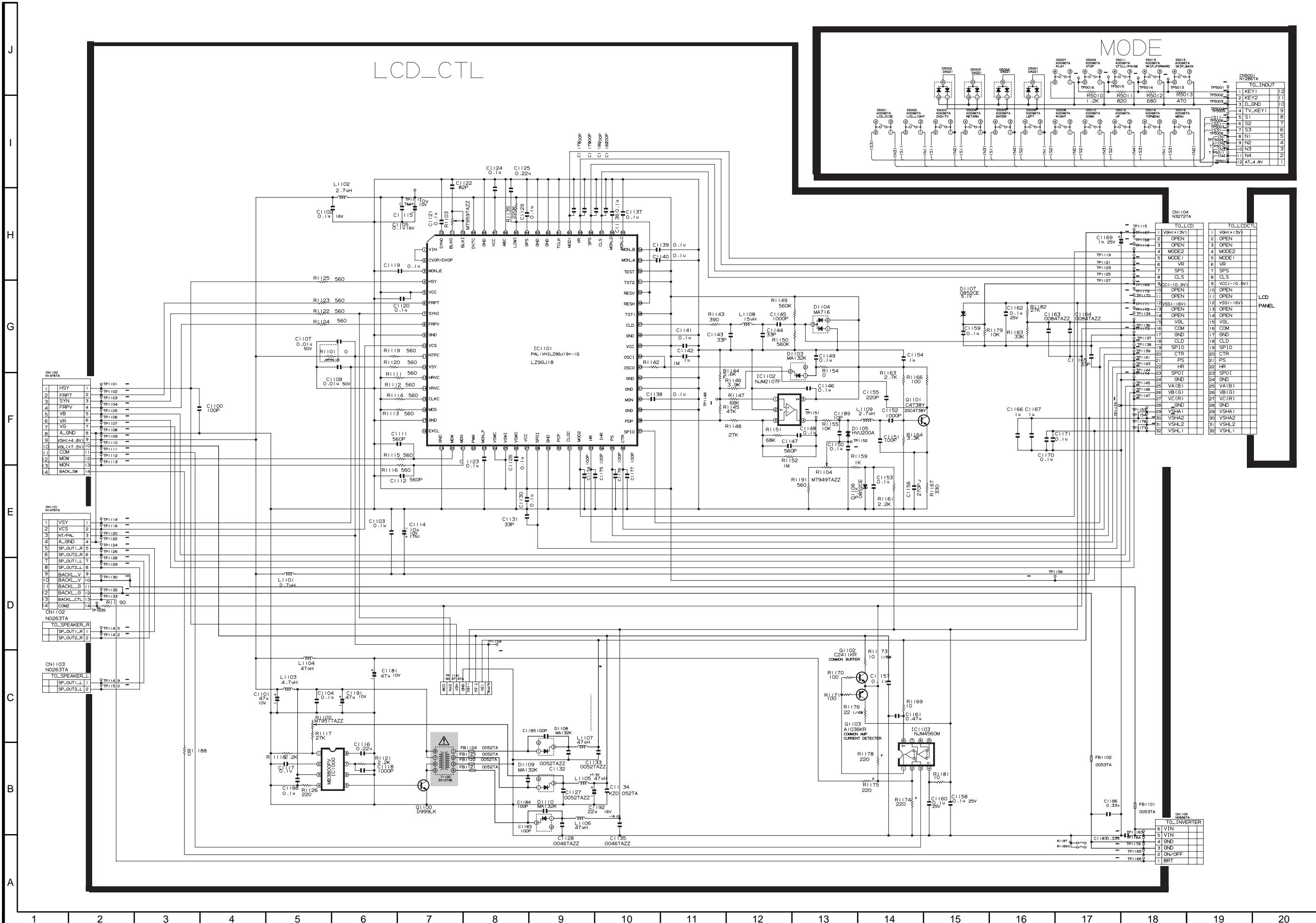


13-3. MAIN (3) CIRCUIT SCHEMATIC DIAGRAM



13-4. LCD CIRCUIT SCHEMATIC DIAGRAM

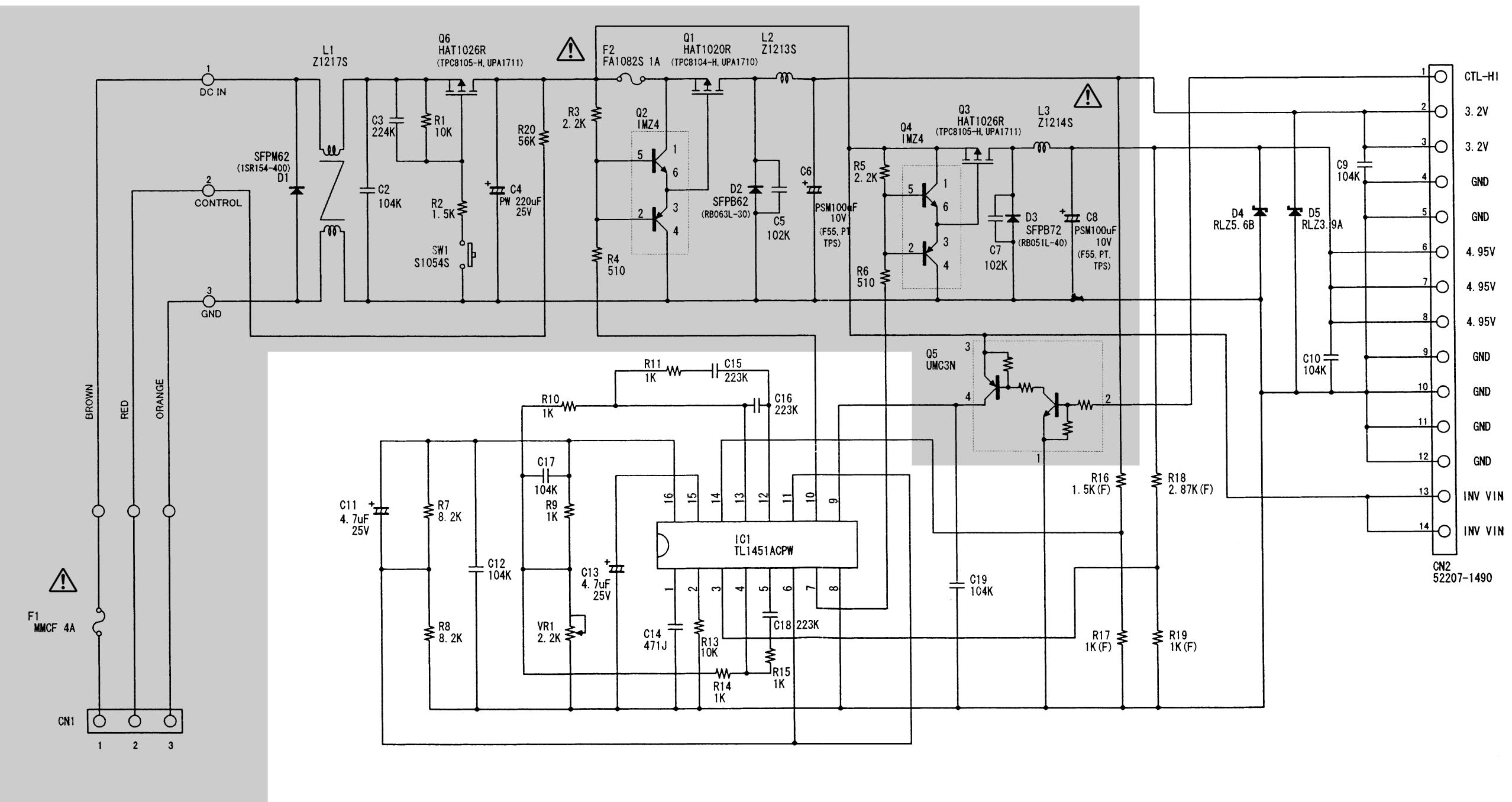
⚠ AND SHADED COMPONENTS=SAFETY RELATED PARTS



13-5. DC/DC CONVERTER CIRCUIT SCHEMATIC DIAGRAM

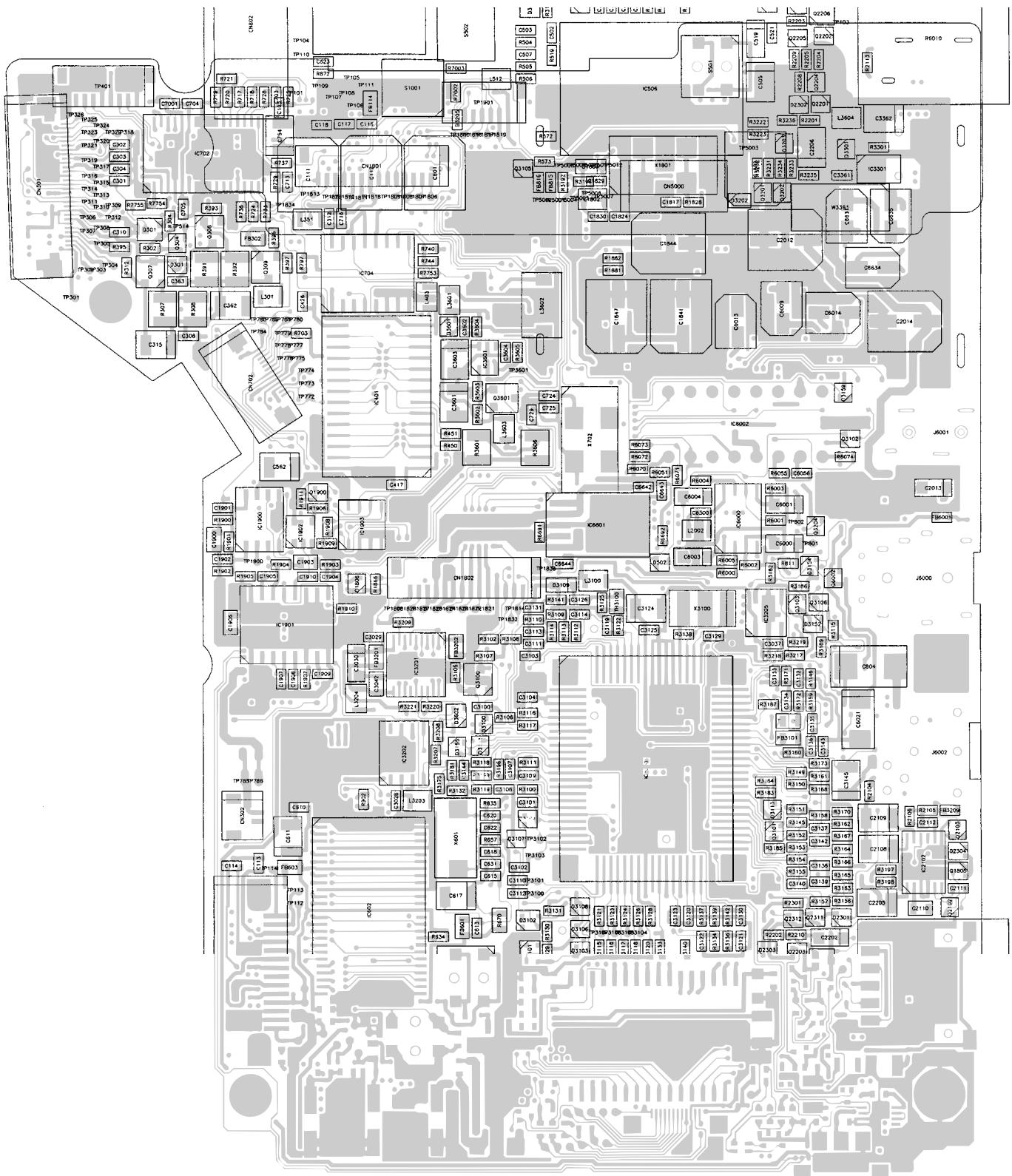
AND SHADED COMPONENTS=SAFETY RELATED PARTS

Note: It becomes Ref. NO. 90XX.

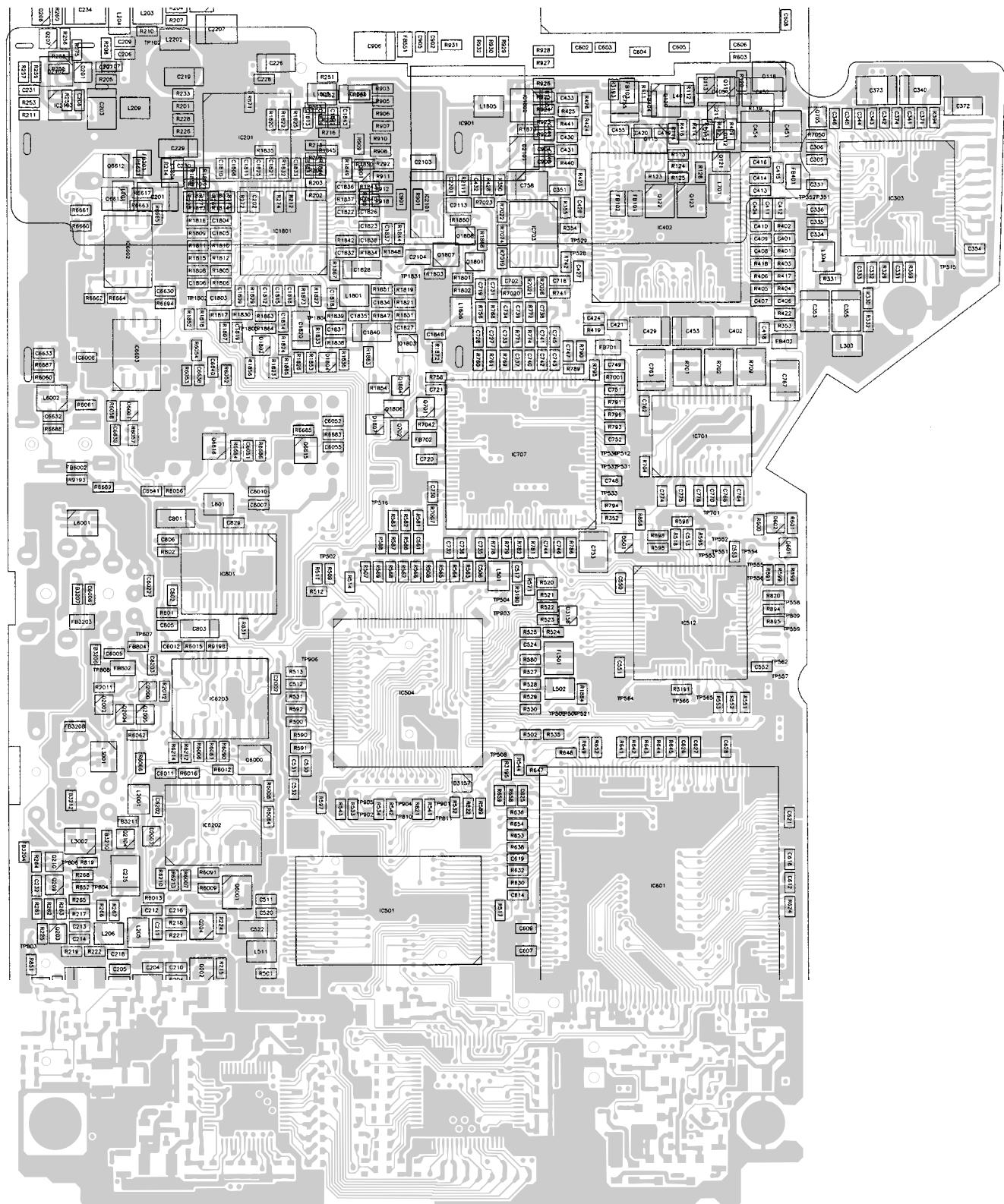


14. PRINTED WIRING BOARD ASSEMBLIES 14-1. MAIN PWB

Component Side



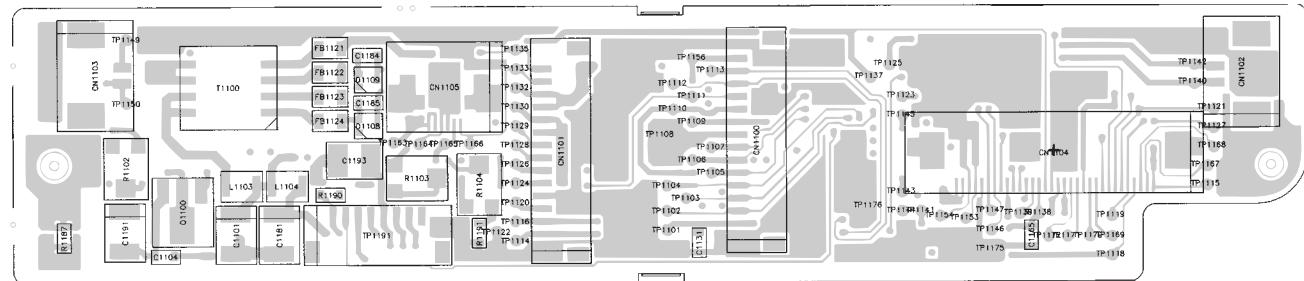
Wiring Side



14-2. LCD PWB

LCD PWB

Component Side



J

I

H

G

F

E

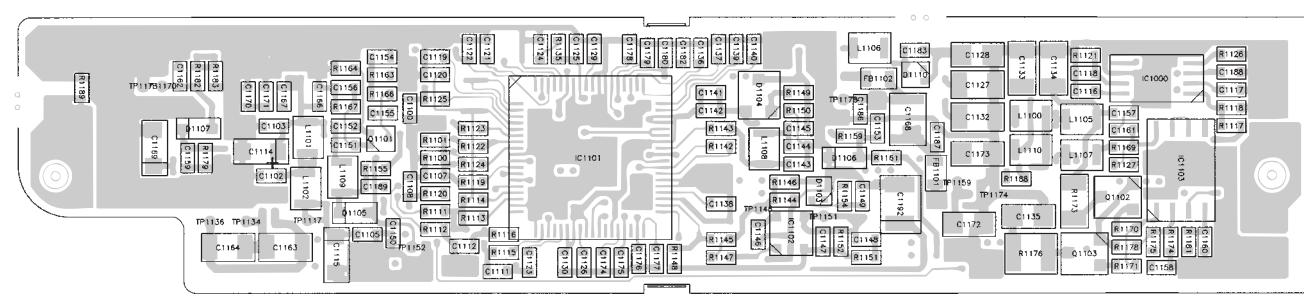
D

C

B

A

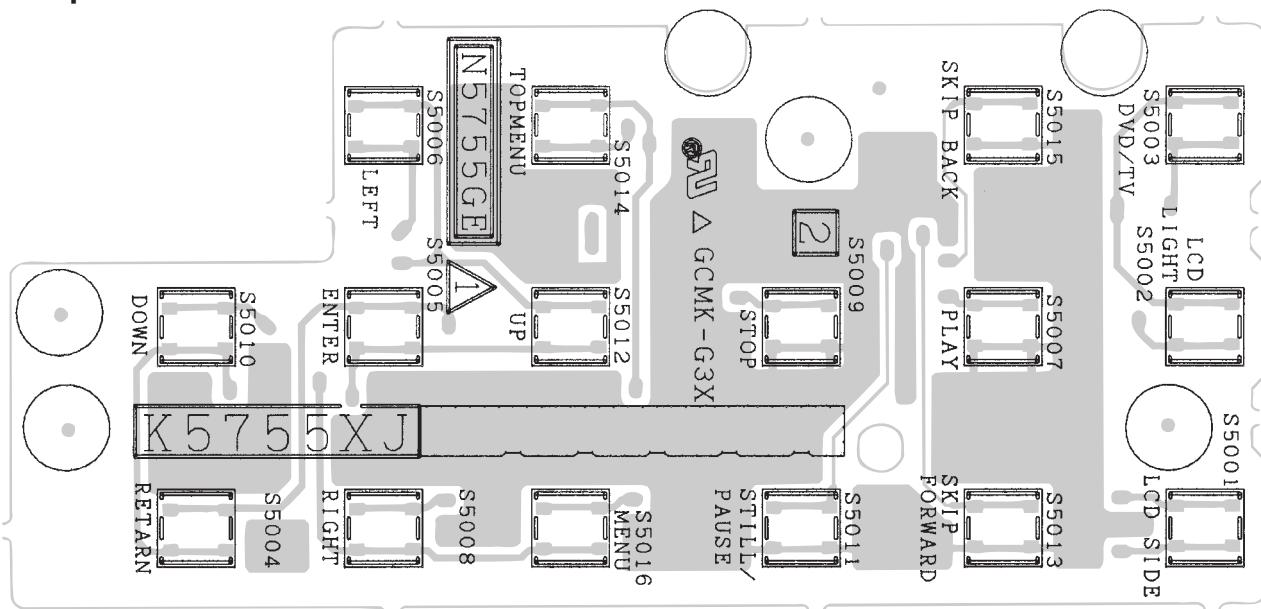
Wiring Side



14-3. OPERATE PWB

OPERATE PWB

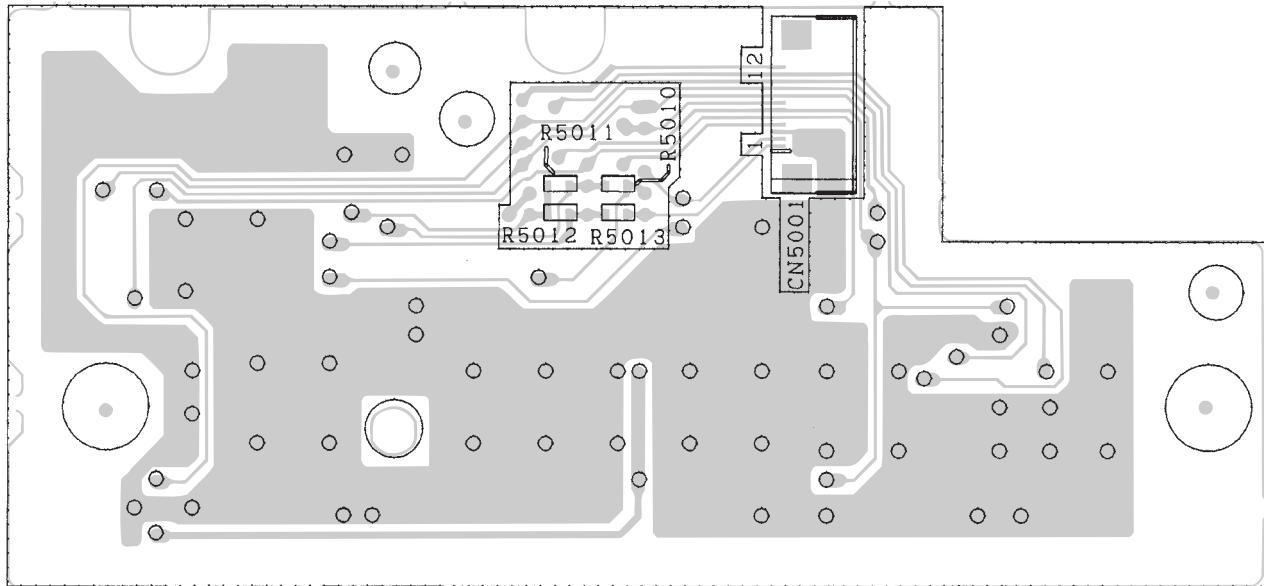
Component Side



A vertical column of labels on the left side of the page lists components from A to Z:

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P
- Q
- R
- S
- T
- U
- V
- W
- X
- Y
- Z

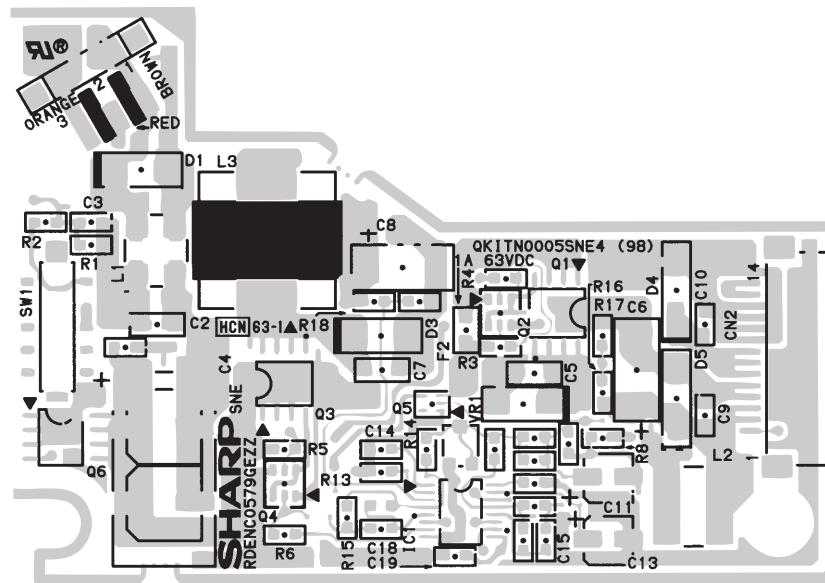
Wiring Side



1 2 3 4 5 6 7 8 9 10

14-4. DC/DC CONVERTER PWB

Note: It becomes Ref. NO. 90XX.



6

1

1

9

1

□

6

6

5

4

15.REPLACEMENT PARTS LIST/ EXPLODED VIEWS

ELECTRICAL PARTS LIST

Parts marked with "▲" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pièces marquées "▲" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pièces que par des pièces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctionnement de l'appareil.

" HOW TO ORDER REPLACEMENT PARTS "

in USA: Contact your nearest SHARP Parts Distributor. For location of SHARP Parts Distributor, Call Toll-free 1-IBE800-SHARP

in CANADA: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100.

★MARK : SPARE PARTS-DELIVERY SECTION:ALL JAPAN

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER	2. REF. NO.
3. PART NO.	4. DESCRIPTION
5. PRICE CODE	

▲ MARK: SAFETY RELATED PARTS
▲ PIECES: RELATIVES A LA SECURITE

PWB ASSEMBLY IS NOT REPLACEMENT ITEM
L'ASSEMBLAGE P.C.I. EST UN ARTICLE NON REMPLACABLE

Ref. No.	Part No.	★	Description	Code
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PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

DUNTK5869KE52	Main PWB Unit	—
DUNTK5870KE52	LCD PWB Unit	—
DUNTK5755XJ6D	Operate PWB Unit	—
RDENC0579GEZZ	DC/DC CONVERTER PWB Unit	—

DUNTK5869KE52 MAIN PWB UNIT

INTEGRATED CIRCUITS

IC201	VHiMC44722A-1	MC44722A, Video Enc.	AX
IC303	RH-iX1517GEZZ	IX1517GE, RF Processor	AX
IC401	RH-iX1622GEZZ	IX1622GE, 4M DRAM	AU
IC402	RH-iX1474GEZZ	IX1474GE, DEM/ECC	BG
IC501	RH-iX1626GEZZ	IX1626GE, Flash Memory	AX
IC504	RH-iX1478GEZZ	IX1478GE, Micro Com.	BA
IC506	RH-iX1618GEZZ	IX1618GE, 1M SRAM	AR
IC512	RH-iX1535GEZZ	IX1535GE, Host I/F	AN
IC601	RH-iX1608GEZZ	IX1608GE, Source Decoder	BM
IC602	RH-iX0793TAZZ	IX0793TA, 16M SDRAM	AX
IC701	VHiAN8473NS-1	AN8473NS, Spin Driver	AN
IC702	VHiBA5933FP-1	BA5933FP	AM
IC703	VHi10324AFV-1	10324AFV	AF
IC704	RH-iX1531CEZZ	IX1531CE, Multiplexer	AF
IC707	RH-iX1473GEZZ	IX1473GE, Servo Processor	BA
IC801	VHiPCM1716E-1	PCM1716E	AV
IC901	RH-iX1516GEZZ	IX1516GE, Gamma S-P Tone	AV
IC1801	VHiiR3Y29BM-1	IR3Y29BM, LCD Decoder	AT

Ref. No.	Part No.	★	Description	Code
IC1900	VHiBA7046F/-1		BA7046F	AF
IC1901	VHiTHC221AF-1		THC221AF	AG
IC1902	VHiTC4S81F/-1		TC4S81F	AC
IC2101	VHiNJM2535V-1		NJM2535V, Input Video Selector	AE
IC2102	VHiTK15400/-1		TK15400	AK
IC2103	VHiTC4S66F/-1		TC4S66F, SW	AD
IC3200	RH-iX1625GEN2		IX1625GE	AT
IC3201	VHiMB8346BV-1		MB8346BV	AN
IC3202	VHiBR93L46F-1		BR93L46F	AG
IC3205	VHiS875045B-1		S875045B	AH
IC3301	VHiTC7W14U/-1		TC7W14U	AG
IC3601	VHiTK11835/-1		TK11835	AH
IC6000	VHiNJM4560M-1		NJM4560M, Audio Amp	AG
IC6002	VHiTDA7053/-1		TDA7053	AL
IC6202	VHiTC4053BF1E		TC4053BF, Multiplexer	AF
IC6203	VHiTC4053BF1E		TC4053BF, Multiplexer	AF
IC6601	VHiPQ20WZ11-1		PQ20WZ11, Batt REG	AG
IC6602	VHiNJM4560M-1		NJM4560M, Audio Amp	AG
TRANSISTORS				
Q112	VS2SA1774F/-1		2SA1774F	AA
Q115	VSFMMT717// -1		FMMT717	AE
Q118	VSFMMT717// -1		FMMT717	AE
Q121	VSDTA114EE/-1		DTA114EE	AB
Q122	VSFMMT717// -1		FMMT717	AE
Q123	VSFMMT717// -1		FMMT717	AE
Q201	VS2SC4738Y/-1		2SC4738Y	AA
Q202	VS2SA1576// -1		2SA1576	AB
Q203	VS2SC4738Y/-1		2SC4738Y	AA
Q204	VS2SA1576// -1		2SA1576	AB
Q211	VSDTC124EE/-1		DTC124EE	AA
Q301	VS2SA1576// -1		2SA1576	AB
Q304	VSDTC144EE/-1		DTC144EE	AA
Q307	VS2SA1298Y/-1		2SA1298Y	AB
Q308	VS2SA1298Y/-1		2SA1298Y	AB
Q309	VS2SA1298Y/-1		2SA1298Y	AB
Q701	VSDTA144EE/-1		DTA144EE	AA
Q702	VSDTC144EE/-1		DTC144EE	AA
Q705	VSDTC144EE/-1		DTC144EE	AA
Q1801	VS2SC4738Y/-1		2SC4738Y	AA
Q1803	VSDTC144EE/-1		DTC144EE	AA
Q1804	VSDTA144EE/-1		DTA144EE	AA
Q1805	VSDTA144EE/-1		DTA144EE	AA
Q1806	VSDTA144EE/-1		DTA144EE	AA
Q1807	VS2SA1576// -1		2SA1576	AB
Q1808	VS2SA1774F/-1		2SA1774F	AA
Q1900	VSDTA114YE/-1		DTA114YE	AB
Q2004	VSDTA114EE/-1		DTA114EE	AB
Q2005	VSDTA114EE/-1		DTA114EE	AB
Q2102	VSDTC114EE/-1		DTC114EE	AB
Q2103	VSDTA144EE/-1		DTA144EE	AA
Q2104	VSDTC114EE/-1		DTC114EE	AB
Q2201	VSDTA144EE/-1		DTA144EE	AA
Q2202	VSDTC144EE/-1		DTC144EE	AA
Q2203	VSDTC144EE/-1		DTC144EE	AA
Q2204	VS2SC4738Y/-1		2SC4738Y	AA
Q2205	VS2SC4738Y/-1		2SC4738Y	AA
Q2206	VS2SA1576// -1		2SA1576	AB
Q2311	VSDTC114EE/-1		DTC114EE	AB
Q2312	VSDTC114EE/-1		DTC114EE	AB
Q3102	VSDTA144EE/-1		DTA144EE	AA
Q3103	VS2SC4738Y/-1		2SC4738Y	AA
Q3201	VS2SC4738Y/-1		2SC4738Y	AA
Q3202	VS2SC4738Y/-1		2SC4738Y	AA
Q3203	VSDTA144EE/-1		DTA144EE	AA
Q3204	VSDTA144EE/-1		DTA144EE	AA
Q3601	VS2SA1362GR-1		2SA1362GR	AC
Q6000	VS2SD1306-E1E		2SD1306-E	AD
Q6001	VS2SD1306-E1E		2SD1306-E	AD
Q6002	VSDTA114EE/-1		DTA114EE	AB
Q6612	VS2SC4213B/-1		2SC4213B	AC
Q6613	VS2SC4213B/-1		2SC4213B	AC
Q6615	VS2SC4213B/-1		2SC4213B	AC
Q6616	VS2SC4213B/-1		2SC4213B	AC

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
DUNTK5869KE52 MAIN PWB UNIT(Continued)														
DIODES AND LED'S														
D112	VHDDAN222/-1		DAN222	AA	L3203	VPAWM470J6R4N		Peaking, 47µH	AC					
D301	VHDDAP222/-1		DAP222	AA	L3204	VPAWM470J6R4N		Peaking, 47µH	AC					
D501	VHDMA132K/-1		MA132K	AA	L3601	VPAWM470J6R4N		Peaking, 47µH	AC					
D502	VHDMA132K/-1		MA132K	AA	L3602	RCiLP0158GEZZ		Coil, CiLP0158GE	AE					
D1802	VHDDAN222/-1		DAN222	AA	L3603	VPAWM100J2R6N		Peaking, 10µH	AC					
D1807	VHDMA132K/-1		MA132K	AA	L3604	VPAWM470J6R4N		Peaking, 47µH	AC					
D2000	VHDDA132K/-1		MA132K	AA	L6001	RCiLF0391TAZZ		Coil, CiLF0391TA	AG					
D2002	VHDMA132K/-1		MA132K	AA	L6002	RCiLF0391TAZZ		Coil, CiLF0391TA	AG					
D2101	VHDMA716///-1		MA716	AC	CONTROL									
D2102	VHDMA716///-1		MA716	AC	R6010	RVR-A4015GEZZ		Variable Resistor	AF					
D2301	VHDDAP222/-1		DAP222	AA	CAPACITORS									
D2302	VHDMA132K/-1		MA132K	AA	C111	VCEAPF0GW227M	220	4V Electrolytic	AB					
D2303	VHDDAN222/-1		MA132K	AA	C112	VCEAPF0JW107M	100	6.3V Electrolytic	AC					
D3100	VHDDAN222/-1		DAN222	AA	C114	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
D3101	VHDDA227///-1		DA227	AB	C115	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
D3102	VHDDA227///-1		DA227	AB	C116	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
D3103	VHDDAN222/-1		DAN222	AA	C117	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
D3106	VHDDA221///-1		DA221	AB	C118	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
D3107	VHDDA221///-1		DA221	AB	C201	VCSATE0JJ476M	47	6.3V Tantalum	AF					
D3108	VHDDA221///-1		DA221	AB	C202	VCKYCY1EB103K	0.01	25V Ceramic	AA					
D3109	VHDHVU17TRF-1		HVU17TRF	AE	C203	VCSATE1AJ476M	47	10V Tantalum	AD					
D3113	VHDMA132K/-1		MA132K	AA	C204	VCCCCY1HH270J	27p	50V Ceramic	AA					
D3151	VHDMA132K/-1		MA132K	AA	C205	VCCCCY1HH560J	56p	50V Ceramic	AA					
D3152	VHDDAN222/-1		DAN222	AA	C206	VCCCCY1HH390J	39p	50V Ceramic	AA					
D3155	VHDDAP222/-1		DAP222	AA	C207	VCCCCY1HH150J	15p	50V Ceramic	AA					
D3159	VHDMA132K/-1		MA132K	AA	C208	VCKYCY1EB103K	0.01	25V Ceramic	AA					
D3202	RH-PX0421CEZZ		PhotoDiode	AD	C210	VCKYCY1EB103K	0.01	25V Ceramic	AA					
D3301	VHDMA132K/-1		MA132K	AA	C211	VCCCCY1HH270J	27p	50V Ceramic	AA					
D3601	VHDMA132K/-1		MA132K	AA	C212	VCCCCY1HH560J	56p	50V Ceramic	AA					
D3602	VHDDA227///-1		DA227	AB	C213	VCCCCY1HH390J	39p	50V Ceramic	AA					
D6001	VHDDAN222/-1		DAN222	AA	C214	VCCCCY1HH150J	15p	50V Ceramic	AA					
TH3100	RH-HZ0025CEZZ		Thermistor	AC	C216	VCKYCY1EB103K	0.01	25V Ceramic	AA					
J6000	VHPGP1F562T-1		PhotoDiode	AQ	C219	VCSATE1AJ476M	47	10V Tantalum	AD					
PACKAGED CIRCUITS														
X601	RCRSC0031GEZZ		Crystal, CRSC0031GE	AK	C220	VCKYCY1HF103Z	0.01	50V Ceramic	AA					
X702	RCRSC0035GEZZ		Crystal, CRSC0035GE	AG	C226	VCSATE1AJ476M	47	10V Tantalum	AD					
X1801	RCRSC0087TAZZ		Crystal, CRSC0087TA	AK	C228	VCKYCY1HF103Z	0.01	50V Ceramic	AA					
FILTERS														
FL501	RFiLC0196GEZZ		Filter, FiLC0196GE	AE	C229	VCSATA0JJ106M	10	6.3V Tantalum	AD					
X3100	RFiLC0201GEZZ		Filter, FiLC0201GE	AD	C230	VCKYCY1HF103Z	0.01	50V Ceramic	AA					
COILS														
L201	VPAWM470J6R4N		Peaking, 47µH	AC	C237	VCEAOA0JW477M	470	6.3V Electrolytic	AC					
L203	VPAWM270J3R9N		Peaking, 27µH	AC	C238	VCEAOA0JW477M	470	6.3V Electrolytic	AC					
L204	VPAWM270J3R9N		Peaking, 27µH	AC	C301	VCKYCY1AF105Z	1	10V Ceramic	AC					
L205	VPAWM270J3R9N		Peaking, 27µH	AC	C302	VCKYCY1AF105Z	1	10V Ceramic	AC					
L206	VPAWM270J3R9N		Peaking, 27µH	AC	C303	VCKYCY1AF105Z	1	10V Ceramic	AC					
L209	VPAWM470J6R4N		Peaking, 47µH	AC	C304	VCKYCY1AF105Z	1	10V Ceramic	AC					
L301	VPAWM100J2R6N		Peaking, 10µH	AC	C305	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L303	VPAWM100J2R6N		Peaking, 10µH	AC	C306	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L304	VPAWM100J2R6N		Peaking, 10µH	AC	C308	VCKYCY1EB103K	0.01	25V Ceramic	AA					
L351	VPAWM100J2R6N		Peaking, 10µH	AC	C310	VCKYCY1AF105Z	1	10V Ceramic	AC					
L401	VPAWM470J6R4N		Peaking, 47µH	AC	C312	VCKYCY1EB103K	0.01	25V Ceramic	AA					
L403	VPAWM470J6R4N		Peaking, 47µH	AC	C315	VCSATE1AJ476M	47	10V Tantalum	AD					
L501	VPAWM470J6R4N		Peaking, 47µH	AC	C331	VCKYCY1EB103K	0.01	25V Ceramic	AA					
L502	VPAWM1R0JR70N		Peaking, 1µH	AC	C332	VCKYCY1AF105Z	1	10V Ceramic	AC					
L511	VPAWM470J6R4N		Peaking, 47µH	AC	C333	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L512	VPAWM470J6R4N		Peaking, 47µH	AC	C334	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L701	VPAWM100J2R6N		Peaking, 10µH	AC	C335	VCKYCY1HB472K	4700p	50V Ceramic	AA					
L801	VPAWM470J6R4N		Peaking, 47µH	AC	C336	VCKYCY1HB472K	4700p	50V Ceramic	AA					
L1803	VPAWM470J6R4N		Peaking, 47µH	AC	C337	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L1804	VPAWM470J6R4N		Peaking, 47µH	AC	C340	VCSATE1AJ226M	22	10V Tantalum	AD					
L2001	VPAWM470J6R4N		Peaking, 47µH	AC	C341	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L2002	VPAWM470J6R4N		Peaking, 47µH	AC	C342	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L2202	VPAWM100J2R6N		Peaking, 10µH	AC	C343	VCKYCY1CB104K	0.1	16V Ceramic	AB					
L3001	RCiLF0391TAZZ		Coil, CiLF0391TA	AG	C344	VCKYCY1HB102K	1000p	50V Ceramic	AA					
L3002	RCiLF0391TAZZ		Coil, CiLF0391TA	AG	C345	VCKYCY1HB102K	1000p	50V Ceramic	AA					
L3100	VPAWM470J6R4N		Peaking, 47µH	AC	C346	VCKYCY1AF105Z	1	10V Ceramic	AC					
					C351	VCKYCY1EB103K	0.01	25V Ceramic	AA					
					C353	VCSATE1AJ476M	47	10V Tantalum	AD					
					C354	VCKYCY1CB104K	0.1	16V Ceramic	AB					
					C355	VCSATE1AJ476M	47	10V Tantalum	AD					
					C362	VCSATE1AJ476M	47	10V Tantalum	AD					
					C363	VCKYCY1EB103K	0.01	25V Ceramic	AA					
					C371	VCKYCY1CB104K	0.1	16V Ceramic	AB					
					C372	VCSAPD0JJ225M	2.2	6.3V Tantalum	AD					
					C373	VCSATE1AJ476M	47	10V Tantalum	AD					

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTK5869KE52 MAIN PWB UNIT(Continued)									
C374	VCKYCY1CB104K	0.1	16V Ceramic	AB	C615	VCKYCY1CB104K	0.1	16V Ceramic	AB
C401	VCKYCY1HB471K	470p	50V Ceramic	AA	C616	VCKYCY1HB102K	1000p	50V Ceramic	AA
C402	VCSATE1AJ476M	47	10V Tantalum	AD	C617	VCSATE0JJ476M	47	6.3V Tantalum	AF
C404	VCKYCY1CB104K	0.1	16V Ceramic	AB	C618	VCKYCY1HB102K	1000p	50V Ceramic	AA
C405	VCSATE1AJ476M	47	10V Tantalum	AD	C619	VCKYCY1HB102K	1000p	50V Ceramic	AA
C406	VCCCCY1HH331J	330p	50V Ceramic	AA	C620	VCCCCY1HH1R0C	1p	50V Ceramic	AA
C407	VCCCCY1HH331J	330p	50V Ceramic	AA	C621	VCKYCY1EB103K	0.01	25V Ceramic	AA
C408	VCKYCY1CB333K	0.033	16V Ceramic	AA	C622	VCCCCY1HH6R0D	6p	50V Ceramic	AA
C409	VCKYCY1EB103K	0.01	25V Ceramic	AA	C623	VCKYCY1AF105Z	1	10V Ceramic	AC
C410	VCCCCY1HH220J	22p	50V Ceramic	AA	C625	VCKYCY1EB103K	0.01	25V Ceramic	AA
C411	VCKYCY1AF105Z	1	10V Ceramic	AC	C626	VCKYCY1HB102K	1000p	50V Ceramic	AA
C412	VCKYCY1EB103K	0.01	25V Ceramic	AA	C627	VCKYCY1EB103K	0.01	25V Ceramic	AA
C413	VCKYCY1AF105Z	1	10V Ceramic	AC	C628	VCKYCY1CB104K	0.1	16V Ceramic	AB
C414	VCKYCY1EB103K	0.01	25V Ceramic	AA	C631	VCCCCY1HH0R5C	0.5p	50V Ceramic	AA
C415	VCKYCY1HB471K	470p	50V Ceramic	AA	C702	VCKYCY1EB103K	0.01	25V Ceramic	AA
C416	VCKYCY1EB103K	0.01	25V Ceramic	AA	C703	VCKYCY1EB103K	0.01	25V Ceramic	AA
C417	VCKYCY1CB104K	0.1	16V Ceramic	AB	C704	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C418	VCKYCY1EB103K	0.01	25V Ceramic	AA	C705	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C419	VCKYCY1EB103K	0.01	25V Ceramic	AA	C713	VCKYCY1HB332K	3300p	50V Ceramic	AA
C420	VCKYCY1EB103K	0.01	25V Ceramic	AA	C716	VCKYCY1EB103K	0.01	25V Ceramic	AA
C421	VCKYCY1EB103K	0.01	25V Ceramic	AA	C718	VCKYCY1HB222K	2200p	50V Ceramic	AA
C424	VCCCCY1HH101J	100p	50V Ceramic	AA	C719	VCKYCY1HB332K	3300p	50V Ceramic	AA
C426	VCKYCY1CB104K	0.1	16V Ceramic	AB	C720	VCKYCY1EB103K	0.01	25V Ceramic	AA
C427	VCKYCY1EB103K	0.01	25V Ceramic	AA	C721	VCKYCY1CB473K	0.047	16V Ceramic	AA
C428	VCKYCY1EB103K	0.01	25V Ceramic	AA	C724	VCCCCY1HH100D	10p	50V Ceramic	AA
C429	VCSATE1AJ476M	47	10V Tantalum	AD	C725	VCCCCY1HH9R0D	9p	50V Ceramic	AA
C430	VCKYCY1EB103K	0.01	25V Ceramic	AA	C727	VCKYCY1EB103K	0.01	25V Ceramic	AA
C431	VCKYCY1EB103K	0.01	25V Ceramic	AA	C728	VCKYCY1EB103K	0.01	25V Ceramic	AA
C432	VCKYCY1EB103K	0.01	25V Ceramic	AA	C729	VCCCCY1HH101J	100p	50V Ceramic	AA
C440	VCKYCY1CB104K	0.1	16V Ceramic	AB	C730	VCKYCY1CB104K	0.1	16V Ceramic	AB
C441	VCKYCY1CB104K	0.1	16V Ceramic	AB	C731	VCKYCY1HB472K	4700p	50V Ceramic	AA
C451	VCSATE1AJ476M	47	10V Tantalum	AD	C733	VCKYCY1HB472K	4700p	50V Ceramic	AA
C452	VCSATE1AJ476M	47	10V Tantalum	AD	C734	VCKYCY1EB103K	0.01	25V Ceramic	AA
C453	VCSATE1AJ476M	47	10V Tantalum	AD	C735	VCKYCY1CB473K	0.047	16V Ceramic	AA
C454	VCSATE1AJ476M	47	10V Tantalum	AD	C736	VCKYCY1CB104K	0.1	16V Ceramic	AB
C455	VCKYCY1CB104K	0.1	16V Ceramic	AB	C737	VCCCCY1HH221J	220p	50V Ceramic	AA
C502	VCKYCY1EB103K	0.01	25V Ceramic	AA	C738	VCKYCY1EB103K	0.01	25V Ceramic	AA
C503	VCKYCY1EB103K	0.01	25V Ceramic	AA	C739	VCKYCY1HB471K	470p	50V Ceramic	AA
C505	VCSATE0JJ476M	47	6.3V Tantalum	AF	C740	VCCCCY1HH221J	220p	50V Ceramic	AA
C506	VCKYCY1CB104K	0.1	16V Ceramic	AB	C741	VCKYCY1EB103K	0.01	25V Ceramic	AA
C507	VCKYCY1EB103K	0.01	25V Ceramic	AA	C742	VCKYCY1EB103K	0.01	25V Ceramic	AA
C511	VCKYCY1EB103K	0.01	25V Ceramic	AA	C743	VCKYCY1HB272K	2700p	50V Ceramic	AA
C512	VCKYCY1EB103K	0.01	25V Ceramic	AA	C744	VCKYCY1EB103K	0.01	25V Ceramic	AA
C513	VCKYCY1CB104K	0.1	16V Ceramic	AB	C745	VCKYCY1EB103K	0.01	25V Ceramic	AA
C517	VCKYCY1EB103K	0.01	25V Ceramic	AA	C746	VCKYCY1EB103K	0.01	25V Ceramic	AA
C519	VCSATA0JJ226M	22	6.3V Tantalum	AD	C747	VCKYCY1EB153K	0.015	25V Ceramic	AA
C520	VCKYCY1EB103K	0.01	25V Ceramic	AA	C748	VCKYCY1EB103K	0.01	25V Ceramic	AA
C521	VCKYCY1EB103K	0.01	25V Ceramic	AA	C749	VCCCCY1HH470J	47p	50V Ceramic	AA
C522	VCSATA1AJ106M	10	10V Tantalum	AC	C751	VCKYCY1EB103K	0.01	25V Ceramic	AA
C524	VCKYCY1EB103K	0.01	25V Ceramic	AA	C752	VCKYCY1EB103K	0.01	25V Ceramic	AA
C530	VCKYCY1EB103K	0.01	25V Ceramic	AA	C753	VCSATE0JJ476M	47	6.3V Tantalum	AF
C531	VCKYCY1EB103K	0.01	25V Ceramic	AA	C754	VCSATE1AJ476M	47	10V Tantalum	AD
C532	VCKYCY1EB103K	0.01	25V Ceramic	AA	C755	VCSATE1AJ476M	47	10V Tantalum	AD
C550	VCKYCY1EB103K	0.01	25V Ceramic	AA	C758	VCSATE1DJ106M	10	20V Tantalum	AD
C551	VCKYCY1EB103K	0.01	25V Ceramic	AA	C762	VCKYCY1CB104K	0.1	16V Ceramic	AB
C552	VCKYCY1EB103K	0.01	25V Ceramic	AA	C763	VCSATE1AJ476M	47	10V Tantalum	AD
C553	VCKYCY1EB103K	0.01	25V Ceramic	AA	C764	VCKYCY1CB104K	0.1	16V Ceramic	AB
C561	VCKYCY1EB822K	8200p	25V Ceramic	AA	C766	VCKYCY1CB104K	0.1	16V Ceramic	AB
C601	VCEAPF0GW227M	220	4V Electrolytic	AB	C767	VCSATE1AJ476M	47	10V Tantalum	AD
C602	VCKYCY1EB103K	0.01	25V Ceramic	AA	C770	VCKYCY1HB222K	2200p	50V Ceramic	AA
C603	VCKYCY1CB104K	0.1	16V Ceramic	AB	C774	VCKYCY1HF103Z	0.01	50V Ceramic	AA
C604	VCKYCY1HB102K	1000p	50V Ceramic	AA	C775	VCKYCY1HF103Z	0.01	50V Ceramic	AA
C605	VCKYCY1CB104K	0.1	16V Ceramic	AB	C776	VCKYCY1HF103Z	0.01	50V Ceramic	AA
C606	VCKYCY1EB103K	0.01	25V Ceramic	AA	C801	VCSATA1AJ106M	10	10V Tantalum	AC
C607	VCKYCY1EB103K	0.01	25V Ceramic	AA	C802	VCKYCY1CB104K	0.1	16V Ceramic	AB
C608	VCKYCY1CB104K	0.1	16V Ceramic	AB	C803	VCSATA1AJ106M	10	10V Tantalum	AC
C609	VCKYCY1CB104K	0.1	16V Ceramic	AB	C804	VCSATD1AJ107M	100	10V Tantalum	AF
C610	VCKYCY1AF105Z	1	10V Ceramic	AC	C805	RC-KZ0162GEZZ	4700p		AB
C611	VCSATE0JJ476M	47	6.3V Tantalum	AF	C806	RC-KZ0162GEZZ	4700p		AB
C612	VCKYCY1EB103K	0.01	25V Ceramic	AA	C829	VCKYCY1CB104K	0.1	16V Ceramic	AB
C613	VCKYCY1CB104K	0.1	16V Ceramic	AB	C901	VCKYCY1HF103Z	0.01	50V Ceramic	AA
C614	VCKYCY1HB102K	1000p	50V Ceramic	AA	C902	VCKYCY1HF103Z	0.01	50V Ceramic	AA
					C903	VCKYCY1HF103Z	0.01	50V Ceramic	AA
					C904	VCKYCY1HF103Z	0.01	50V Ceramic	AA
					C905	VCKYCY1CF104Z	0.1	16V Ceramic	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTK5869KE52 MAIN PWB UNIT(Continued)									
C906	VCSATE1AJ476M	47	10V Tantalum	AD	C3104	VCCCCY1HH221J	220p	50V Ceramic	AA
C1802	VCEAPF1AW476M	47	10V Electrolytic	AB	C3107	VCCCCY1HH101J	100p	50V Ceramic	AA
C1803	RC-KZ0082TAZZ	1	10V	AC	C3108	VCCCCY1HH101J	100p	50V Ceramic	AA
C1804	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3109	VCCCCY1HH471J	470p	50V Ceramic	AA
C1805	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3110	VCCCCY1HH471J	470p	50V Ceramic	AA
C1806	VCCCCY1EH821J	820p	25V Ceramic	AB	C3111	VCCCCY1HH221J	220p	50V Ceramic	AA
C1807	VCKCYC1AF105Z	1	10V Ceramic	AC	C3112	VCCCCY1HH471J	470p	50V Ceramic	AA
C1808	VCKCYC1AF105Z	1	10V Ceramic	AC	C3113	VCCCCY1HH221J	220p	50V Ceramic	AA
C1809	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3114	VCCCCY1HH221J	220p	50V Ceramic	AA
C1810	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3115	VCCCCY1HH471J	470p	50V Ceramic	AA
C1811	VCKCYC1AF105Z	1	10V Ceramic	AC	C3116	VCCCCY1HH471J	470p	50V Ceramic	AA
C1812	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3117	VCCCCY1HH471J	470p	50V Ceramic	AA
C1813	VCKCYC1AF105Z	1	10V Ceramic	AC	C3118	VCCCCY1HH471J	470p	50V Ceramic	AA
C1814	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3119	VCCCCY1HH220J	22p	50V Ceramic	AA
C1815	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3120	VCCCCY1HH471J	470p	50V Ceramic	AA
C1816	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3121	VCKCYC1HF103Z	0.01	50V Ceramic	AA
C1817	VCCCCY1HH5R0C	5p	50V Ceramic	AA	C3122	VCKCYC1HF103Z	0.01	50V Ceramic	AA
C1818	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3123	VCKCYC1HF103Z	0.01	50V Ceramic	AA
C1819	VCKCYC1AF105Z	1	10V Ceramic	AC	C3124	VCSATE1AJ476M	47	10V Tantalum	AD
C1820	VCSATN1AJ225M	2.2	10V Tantalum	AC	C3125	VCKCYC1AF105Z	1	10V Ceramic	AC
C1821	VCKCYC1CF474Z	0.47	16V Ceramic	AB	C3126	VCCCCY1HH470J	47p	50V Ceramic	AA
C1825	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3129	VCCCCY1HH471J	470p	50V Ceramic	AA
C1827	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3130	VCKCYC1HF103Z	0.01	50V Ceramic	AA
C1828	VCSATA1AJ106M	10	10V Tantalum	AC	C3131	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C1831	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3132	VCCCCY1HH471J	470p	50V Ceramic	AA
C1833	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3133	VCCCCY1HH471J	470p	50V Ceramic	AA
C1834	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3134	VCCCCY1HH471J	470p	50V Ceramic	AA
C1836	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3135	VCCCCY1HH471J	470p	50V Ceramic	AA
C1837	VCKCYC1HF473Z	0.047	50V Ceramic	AA	C3136	VCCCCY1HH471J	470p	50V Ceramic	AA
C1838	VCKCYC1HF103Z	0.01	50V Ceramic	AA	C3137	VCCCCY1HH471J	470p	50V Ceramic	AA
C1839	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3138	VCCCCY1HH471J	470p	50V Ceramic	AA
C1840	VCSATA1AJ106M	10	10V Tantalum	AC	C3139	VCCCCY1HH471J	470p	50V Ceramic	AA
C1841	VCSATD1AJ107M	100	10V Tantalum	AF	C3140	VCCCCY1HH471J	470p	50V Ceramic	AA
C1842	VCKCYC1AF105Z	1	10V Ceramic	AC	C3142	VCCCCY1HH471J	470p	50V Ceramic	AA
C1843	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C3143	VCCCCY1HH471J	470p	50V Ceramic	AA
C1844	VCEAPF0JW107M	100	6.3V Electrolytic	AC	C3144	VCCCCY1HH471J	470p	50V Ceramic	AA
C1845	VCSATE1AJ476M	47	10V Tantalum	AD	C3145	VCSATA1AJ106M	10	10V Tantalum	AC
C1847	VCSATD1AJ107M	100	10V Tantalum	AF	C3361	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C1900	VCKYT1CF105Z	1	16V Ceramic	AB	C3362	VCSATE1AJ476M	47	10V Tantalum	AD
C1901	VCKCYC1HF222K	2200p	50V Ceramic	AA	C3601	VCSATE1AJ476M	47	10V Tantalum	AD
C1902	VCCCCY1HH101J	100p	50V Ceramic	AA	C3602	VCKCYC1HB102K	1000p	50V Ceramic	AA
C1903	VCKYT1CF105Z	1	16V Ceramic	AB	C3603	VCSATE1AJ476M	47	10V Tantalum	AD
C1904	VCCCCY1HH331J	330p	50V Ceramic	AA	C3604	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C1905	VCCCCY1HH221J	220p	50V Ceramic	AA	C3600	VCSATA1AJ106M	10	10V Tantalum	AC
C1906	VCKYT1CF105Z	1	16V Ceramic	AB	C6001	VCSATA1AJ106M	10	10V Tantalum	AC
C1907	VCCCCY1HH121J	120p	50V Ceramic	AA	C6003	VCSATA1AJ106M	10	10V Tantalum	AC
C1908	VCCCCY1HH121J	120p	50V Ceramic	AA	C6004	VCSATA1AJ106M	10	10V Tantalum	AC
C1909	VCCCCY1HH391J	390p	50V Ceramic	AA	C6005	RC-KZ0161GEZZ	3900p		AB
C2002	VCKCYC1AF105Z	1	10V Ceramic	AC	C6006	RC-KZ0161GEZZ	3900p		AB
C2012	VCEAPF0JW107M	100	6.3V Electrolytic	AC	C6007	VCKCYC1AF105Z	1	10V Ceramic	AC
C2013	VCSATA1AJ106M	10	10V Tantalum	AC	C6008	VCKCYC1CB104K	0.1	16V Ceramic	AB
C2014	VCEAPF0JW107M	100	6.3V Electrolytic	AC	C6009	VCEAPF1CW106M	10	16V Electrolytic	AB
C2104	RC-KZ0082TAZZ	1	10V	AC	C6010	VCKCYC1CB104K	0.1	16V Ceramic	AB
C2108	VCSATE0JJ107M	100	6.3V Tantalum	AE	C6011	VCKCYC1AF105Z	1	10V Ceramic	AC
C2109	VCSATE1AJ336M	33	10V Tantalum	AG	C6012	VCKCYC1AF105Z	1	10V Ceramic	AC
C2110	RC-KZ0082TAZZ	1	10V	AC	C6013	VCEAPF1CW106M	10	16V Electrolytic	AB
C2111	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C6014	VCEAPF1CW106M	10	16V Electrolytic	AB
C2112	VCKCYC1CF473Z	0.047	16V Ceramic	AA	C6021	VCSATJ0JJ107M	100	6.3V Tantalum	AE
C2113	RC-KZ0082TAZZ	1	10V	AC	C6022	VCKCYC1EB103K	0.01	25V Ceramic	AA
C2201	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C6051	VCKCYC1AF105Z	1	10V Ceramic	AC
C2202	VCSATA0JJ106M	10	6.3V Tantalum	AD	C6052	VCKCYC1AF105Z	1	10V Ceramic	AC
C2205	VCSATE1AJ476M	47	10V Tantalum	AD	C6055	VCKCYC1EB223K	0.022	25V Ceramic	AA
C2206	VCSATE1AJ476M	47	10V Tantalum	AD	C6056	VCKCYC1EB223K	0.022	25V Ceramic	AA
C2207	VCSATE1AJ476M	47	10V Tantalum	AD	C6202	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C3028	VCKCYC1CF104Z	0.1	16V Ceramic	AA	C6203	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C3029	VCKCYC1AF105Z	1	10V Ceramic	AC	C6300	VCKCYC1CF104Z	0.1	16V Ceramic	AA
C3030	VCSATA0JJ226M	22	6.3V Tantalum	AD	C6630	VCKCYC1EB103K	0.01	25V Ceramic	AA
C3037	VCKCYC1EB223K	0.022	25V Ceramic	AA	C6631	VCEAPF1CW106M	10	16V Electrolytic	AB
C3042	VCKYT1EB104K	0.1	25V Ceramic	AB	C6632	VCKCYC1CB104K	0.1	16V Ceramic	AB
C3101	VCCCCY1HH471J	470p	50V Ceramic	AA	C6633	VCKCYC1CB104K	0.1	16V Ceramic	AB
C3102	VCCCCY1HH471J	470p	50V Ceramic	AA	C6634	VCEAPF1CW106M	10	16V Electrolytic	AB
C3103	VCCCCY1HH471J	470p	50V Ceramic	AA	C6635	VCEAPF1CW106M	10	16V Electrolytic	AB
					C6638	VCKCYC1CB683K	0.068	16V Ceramic	AC
					C6639	VCKCYC1CB683K	0.068	16V Ceramic	AC
					C6640	VCKCYC1CB104K	0.1	16V Ceramic	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTK5869KE52 MAIN PWB UNIT(Continued)									
C6641	VCKYCY1CB104K	0.1	16V Ceramic	AB	R413	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
C6642	VCKYCY1HF103Z	0.01	50V Ceramic	AA	R414	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
C6643	VCKYCY1HF103Z	0.01	50V Ceramic	AA	R416	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
C7001	VCKYCY1HB102K	1000p	50V Ceramic	AA	R417	VRS-CY1JF224J	220k	1/16W Metal Oxide	AA
RESISTORS									
FB3203	VRS-TV1JD000J	0	1/16W Metal Oxide	AA	R418	VRS-CY1JF274J	270k	1/16W Metal Oxide	AA
FB3204	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R419	VRS-CY1JF221J	220	1/16W Metal Oxide	AA
R113	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R422	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R114	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R423	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R119	VRS-TW2ED820J	82	1/4W Metal Oxide	AB	R424	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R120	VRS-CY1JF681J	680	1/16W Metal Oxide	AA	R428	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R123	VRS-CY1JF153J	15k	1/16W Metal Oxide	AA	R440	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R124	VRS-CY1JF561J	560	1/16W Metal Oxide	AA	R441	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R125	VRS-CY1JF122J	1.2k	1/16W Metal Oxide	AA	R450	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R126	VRS-CY1JF561J	560	1/16W Metal Oxide	AA	R500	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R201	VRS-CY1JF181J	180	1/16W Metal Oxide	AA	R501	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R204	VRS-CY1JF681J	680	1/16W Metal Oxide	AA	R502	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R205	VRS-CY1JF392J	3.9k	1/16W Metal Oxide	AA	R504	VRS-CY1JF332J	3.3k	1/16W Metal Oxide	AA
R207	VRS-CY1JF681J	680	1/16W Metal Oxide	AA	R505	VRS-CY1JF332J	3.3k	1/16W Metal Oxide	AA
R208	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R506	VRS-CY1JF332J	3.3k	1/16W Metal Oxide	AA
R211	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R507	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R212	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R508	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R215	VRS-CY1JF201F	200	1/16W Metal Oxide	AA	R509	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R217	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R511	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R218	VRS-CY1JF681J	680	1/16W Metal Oxide	AA	R512	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R219	VRS-CY1JF392J	3.9k	1/16W Metal Oxide	AA	R513	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R221	VRS-CY1JF681J	680	1/16W Metal Oxide	AA	R514	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R222	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R517	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R224	VRS-CY1JF201F	200	1/16W Metal Oxide	AA	R518	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R225	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R519	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R226	VRS-CY1JF181J	180	1/16W Metal Oxide	AA	R520	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R228	VRS-CY1JF181J	180	1/16W Metal Oxide	AA	R521	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R233	VRS-CY1JF181J	180	1/16W Metal Oxide	AA	R522	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R269	VRS-CY1JF182J	1.8k	1/16W Metal Oxide	AA	R523	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R270	VRS-CY1JF152F	1.5k	1/16W Metal Oxide	AA	R524	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R271	VRS-CY1JF152F	1.5k	1/16W Metal Oxide	AA	R525	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R272	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R527	VRS-CY1JF100J	10	1/16W Metal Oxide	AA
R273	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R528	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R274	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R529	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R275	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R530	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R290	VRS-CY1JF220J	22	1/16W Metal Oxide	AA	R531	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R302	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R532	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R304	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R533	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R307	VRS-TW2ED470J	47	1/4W Metal Oxide	AA	R534	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R308	VRS-TW2ED470J	47	1/4W Metal Oxide	AA	R535	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R312	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R551	VRS-CY1JF560J	56	1/16W Metal Oxide	AA
R329	VRS-CY1JF123J	12k	1/16W Metal Oxide	AA	R552	VRS-CY1JF560J	56	1/16W Metal Oxide	AA
R330	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA	R553	VRS-CY1JF560J	56	1/16W Metal Oxide	AA
R331	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R563	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R332	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R564	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R350	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R565	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R352	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R566	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R353	VRS-CY1JF151J	150	1/16W Metal Oxide	AA	R567	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R354	VRS-CY1JF103F	10k	1/16W Metal Oxide	AA	R568	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R355	VRS-CY1JF683F	68k	1/16W Metal Oxide	AA	R569	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R369	VRS-CY1JF335J	3.3M	1/16W Metal Oxide	AA	R571	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R391	VRS-TW2ED470J	47	1/4W Metal Oxide	AA	R572	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R392	VRS-TW2ED470J	47	1/4W Metal Oxide	AA	R573	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R393	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R581	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R394	VRS-CY1JF335J	3.3M	1/16W Metal Oxide	AA	R582	VRS-CY1JF100J	10	1/16W Metal Oxide	AA
R395	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R583	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R396	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R589	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R397	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R590	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R401	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R591	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R402	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA	R592	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R403	VRS-CY1JF103F	10k	1/16W Metal Oxide	AA	R595	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R404	VRS-CY1JF153F	15k	1/16W Metal Oxide	AA	R596	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R405	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R597	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R406	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R598	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R409	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA	R599	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R412	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R603	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
					R630	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
					R632	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
					R634	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
					R635	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
					R636	VRS-CY1JF560J	56	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTK5869KE52 MAIN PWB UNIT(Continued)									
R638	VRS-CY1JF560J	56	1/16W Metal Oxide	AA	R901	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R641	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R902	VRS-CY1JF220J	22	1/16W Metal Oxide	AA
R642	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R903	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R643	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R904	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R644	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R905	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R645	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R906	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R647	VRS-CY1JF560J	56	1/16W Metal Oxide	AA	R907	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R648	VRS-CY1JF560J	56	1/16W Metal Oxide	AA	R908	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R649	VRS-CY1JF560J	56	1/16W Metal Oxide	AA	R909	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R652	VRS-CY1JF560J	56	1/16W Metal Oxide	AA	R910	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R653	VRS-CY1JF564J	560k	1/16W Metal Oxide	AA	R911	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R654	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R912	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R657	VRS-CY1JF4R7J	4.7	1/16W Metal Oxide	AA	R918	VRS-CY1JF820J	82	1/16W Metal Oxide	AA
R658	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R922	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R670	VRS-TV1JD100J	10	1/16W Metal Oxide	AA	R932	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R701	VRS-TW2ED1R0J	1	1/4W Metal Oxide	AB	R1801	VRS-CY1JF181J	180	1/16W Metal Oxide	AA
R702	VRS-TW2ED1R0J	1	1/4W Metal Oxide	AB	R1802	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R703	VRS-CY1JF151J	150	1/16W Metal Oxide	AA	R1803	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R704	VRS-CY1JF151J	150	1/16W Metal Oxide	AA	R1805	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R709	VRS-TW2ED1R0J	1	1/4W Metal Oxide	AB	R1806	VRS-CY1JF391J	390	1/16W Metal Oxide	AA
R717	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1807	VRS-CY1JF333J	33k	1/16W Metal Oxide	AA
R718	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA	R1809	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R720	VRS-CY1JF123J	12k	1/16W Metal Oxide	AA	R1810	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R721	VRS-CY1JF821J	820	1/16W Metal Oxide	AA	R1811	VRS-CY1JF333J	33k	1/16W Metal Oxide	AA
R724	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R1812	VRS-CY1JF683J	68k	1/16W Metal Oxide	AA
R725	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R1813	VRS-CY1JF472F	4.7k	1/16W Metal Oxide	AA
R728	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1814	VRS-CY1JF272F	2.7k	1/16W Metal Oxide	AA
R729	VRS-CY1JF273J	27k	1/16W Metal Oxide	AA	R1815	VRS-CY1JF105J	1M	1/16W Metal Oxide	AA
R733	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R1817	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA
R737	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1818	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA
R738	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA	R1820	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R740	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA	R1822	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R741	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1823	VRS-CY1JF392J	3.9k	1/16W Metal Oxide	AA
R742	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R1824	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R744	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1825	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R756	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1826	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA
R758	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1827	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R760	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1828	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA
R761	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1829	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA
R768	VRS-CY1JF331J	330	1/16W Metal Oxide	AA	R1830	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R769	VRS-CY1JF331J	330	1/16W Metal Oxide	AA	R1831	VRS-CY1JF561J	560	1/16W Metal Oxide	AA
R771	VRS-CY1JF123J	12k	1/16W Metal Oxide	AA	R1832	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA
R772	VRS-CY1JF123J	12k	1/16W Metal Oxide	AA	R1833	VRS-CY1JF334J	330k	1/16W Metal Oxide	AA
R774	VRS-CY1JF123J	12k	1/16W Metal Oxide	AA	R1834	VRS-CY1JF334J	330k	1/16W Metal Oxide	AA
R778	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1835	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA
R779	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1838	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R781	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1839	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R782	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1843	VRS-CY1JF474J	470k	1/16W Metal Oxide	AA
R786	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1844	VRS-CY1JF685J	6.8M	1/16W Metal Oxide	AA
R789	VRS-CY1JF335J	3.3M	1/16W Metal Oxide	AA	R1846	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R790	VRS-CY1JF333J	33k	1/16W Metal Oxide	AA	R1847	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R791	VRS-CY1JF124J	120k	1/16W Metal Oxide	AA	R1848	VRS-CY1JF273J	27k	1/16W Metal Oxide	AA
R793	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA	R1850	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R794	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1851	VRS-CY1JF153J	15k	1/16W Metal Oxide	AA
R795	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA	R1854	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R796	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R1856	VRS-CY1JF224J	220k	1/16W Metal Oxide	AA
R797	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R1858	VRS-CY1JF683J	68k	1/16W Metal Oxide	AA
R801	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R1859	VRS-CY1JF393J	39k	1/16W Metal Oxide	AA
R802	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R1860	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R811	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R1863	VRS-CY1JF152J	1.5k	1/16W Metal Oxide	AA
R819	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R1864	VRS-CY1JF152J	1.5k	1/16W Metal Oxide	AA
R820	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R1865	VRS-CY1JF152J	1.5k	1/16W Metal Oxide	AA
R821	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R1868	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R822	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R1871	VRS-CY1JF153J	15k	1/16W Metal Oxide	AA
R831	VRS-CY1JF8R2J	8.2	1/16W Metal Oxide	AA	R1873	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R851	VRS-CY1JF100J	10	1/16W Metal Oxide	AA	R1900	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R852	VRS-CY1JF100J	10	1/16W Metal Oxide	AA	R1901	VRS-CY1JF474F	470k	1/16W Metal Oxide	AA
R871	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R1902	VRS-CY1JF134F	130k	1/16W Metal Oxide	AA
R891	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1903	VRS-CY1JF331J	330	1/16W Metal Oxide	AA
R894	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1904	VRS-CY1JF474J	470k	1/16W Metal Oxide	AA
R895	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R1905	VRS-CY1JF223F	22k	1/16W Metal Oxide	AA
R898	VRS-CY1JF824J	820k	1/16W Metal Oxide	AA	R1906	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA
					R1907	VRS-CY1JF104F	100k	1/16W Metal Oxide	AA
					R2011	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
					R2012	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
DUNTK5869KE52 MAIN PWB UNIT(Continued)									
R2104	VRS-CY1JF750J	75	1/16W Metal Oxide	AA	R3186	VRS-CY1JF683J	68k	1/16W Metal Oxide	AA
R2105	VRS-CY1JF750J	75	1/16W Metal Oxide	AA	R3187	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R2106	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R3190	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R2107	VRS-CY1JF391J	390	1/16W Metal Oxide	AA	R3192	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R2111	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R3194	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R2113	VRS-CY1JF221J	220	1/16W Metal Oxide	AA	R3195	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R2201	VRS-CY1JF332J	3.3k	1/16W Metal Oxide	AA	R3196	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R2202	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R3197	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R2203	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	R3198	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA
R2204	VRS-CY1JF682J	6.8k	1/16W Metal Oxide	AA	R3207	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R2205	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA	R3208	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R2208	VRS-CY1JF181J	180	1/16W Metal Oxide	AA	R3209	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA
R2209	VRS-CY1JF750J	75	1/16W Metal Oxide	AA	R3217	VRS-CY1JF243F	24k	1/16W Metal Oxide	AA
R2210	VRS-CY1JF561J	560	1/16W Metal Oxide	AA	R3218	VRS-CY1JF153F	15k	1/16W Metal Oxide	AA
R2301	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R3219	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3100	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R3220	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R3112	VRS-CY1JF821J	820	1/16W Metal Oxide	AA	R3221	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R3113	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R3222	VRS-CY1JF561J	560	1/16W Metal Oxide	AA
R3114	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R3223	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R3115	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R3231	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3116	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R3232	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3117	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R3233	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3118	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R3234	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3119	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R3235	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3121	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R3236	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3122	VRS-CY1JF332J	3.3k	1/16W Metal Oxide	AA	R3301	VRS-CY1JF750J	75	1/16W Metal Oxide	AA
R3123	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R3601	VRS-TW2ED1R5J	1.5	1/4W Metal Oxide	AB
R3124	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R3602	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R3125	VRS-CY1JF182J	1.8k	1/16W Metal Oxide	AA	R3603	VRS-CY1JF221J	220	1/16W Metal Oxide	AA
R3126	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	R3604	VRS-CY1JF154J	150k	1/16W Metal Oxide	AA
R3128	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R3605	VRS-CY1JF433J	43k	1/16W Metal Oxide	AA
R3129	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R3606	VRS-TW2ED1R5J	1.5	1/4W Metal Oxide	AB
R3130	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6000	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R3131	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6001	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R3132	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6002	VRS-CY1JF474J	470k	1/16W Metal Oxide	AA
R3133	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R6003	VRS-CY1JF474J	470k	1/16W Metal Oxide	AA
R3137	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6004	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R3138	VRS-CY1JF105J	1M	1/16W Metal Oxide	AA	R6005	VRS-CY1JF183J	18k	1/16W Metal Oxide	AA
R3139	VRS-CY1JF272J	2.7k	1/16W Metal Oxide	AA	R6006	VRS-CY1JF821J	820	1/16W Metal Oxide	AA
R3140	VRS-CY1JF272J	2.7k	1/16W Metal Oxide	AA	R6007	VRS-CY1JF821J	820	1/16W Metal Oxide	AA
R3141	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R6008	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R3142	VRS-CY1JF105J	1M	1/16W Metal Oxide	AA	R6009	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA
R3145	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6012	VRS-CY1JF272J	2.7k	1/16W Metal Oxide	AA
R3146	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6013	VRS-CY1JF272J	2.7k	1/16W Metal Oxide	AA
R3149	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6015	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R3150	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6016	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R3151	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6051	VRS-CY1JF182J	1.8k	1/16W Metal Oxide	AA
R3152	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6052	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3153	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6053	VRS-CY1JF152J	1.5k	1/16W Metal Oxide	AA
R3154	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6054	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA
R3155	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6055	VRS-CY1JF182J	1.8k	1/16W Metal Oxide	AA
R3156	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6056	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3157	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6057	VRS-CY1JF152J	1.5k	1/16W Metal Oxide	AA
R3158	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R6058	VRS-CY1JF222J	2.2k	1/16W Metal Oxide	AA
R3159	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6060	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R3160	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6061	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
R3161	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R6062	VRS-CY1JF562J	5.6k	1/16W Metal Oxide	AA
R3162	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6063	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3163	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6064	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA
R3164	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6066	VRS-CY1JF101J	100	1/16W Metal Oxide	AA
R3165	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6070	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R3166	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6071	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R3167	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6090	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3168	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6091	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3170	VRS-CY1JF153J	15k	1/16W Metal Oxide	AA	R6210	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3171	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6212	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3172	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	R6213	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3173	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	R6214	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA
R3181	VRS-CY1JF101J	100	1/16W Metal Oxide	AA	R6617	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R3182	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	R6621	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA
R3183	VRS-CY1JF154J	150k	1/16W Metal Oxide	AA	R6622	VRS-CY1JF000J	0	1/16W Metal Oxide	AA
R3185	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	R6660	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
					R6661	VRS-CY1JF151J	150	1/16W Metal Oxide	AA
					R6662	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
DUNTK5869KE52 MAIN PWB UNIT(Continued)														
R6663	VRS-CY1JF472J	4.7k	1/16W Metal Oxide	AA	TP1901	QPLGN0676TAZZ		Plug, 6Pin	AE					
R6664	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	W3361	RRMCU0012TAZZ		Remote Receiver	AL					
R6665	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	DUNTK5870KE52 LCD PWB UNIT									
R6683	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA	INTEGRATED CIRCUITS									
R6684	VRS-CY1JF822J	8.2k	1/16W Metal Oxide	AA	IC1000	VHiMB3800PV-1		MB3800PV	AL					
R6685	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	IC1101	VHiLZ9GJ18/-1		LZ9GJ18	AQ					
R6686	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	IC1102	VHiNJM2107F-1		NJM2107F	AE					
R6687	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	IC1103	VHiNJM4560M-1		NJM4560M	AG					
R6688	VRS-CY1JF102J	1k	1/16W Metal Oxide	AA	TRANSISTORS									
R6689	VRS-CY1JF104J	100k	1/16W Metal Oxide	AA	Q1100	VS2SD999LK/-1		2SD999LK	AC					
R6691	VRS-CY1JF122F	1.2k	1/16W Metal Oxide	AA	Q1101	VS2SC4738Y/-1		2SC4738Y	AA					
R6692	VRS-CY1JF222F	2.2k	1/16W Metal Oxide	AA	Q1102	VS2SC2411KR-1		2SC2411KR	AC					
R6694	VRS-CY1JF474J	470k	1/16W Metal Oxide	AA	Q1103	VS2SA1036KR-1		2SA1036KR	AC					
R7001	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	DIODES									
R7007	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	D1103	VHDM132K//1		MA132K	AA					
R7019	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	D1104	VHDM1716//1		MA716	AC					
R7020	VRS-CY1JF473J	47k	1/16W Metal Oxide	AA	D1105	VHDHVU200A/1		HVU200A	AC					
R7021	VRS-CY1JF682J	6.8k	1/16W Metal Oxide	AA	D1106	RH-EX0852CEZZ		Zener, EX0852CE	AC					
R7022	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	D1107	RH-EX0852CEZZ		Zener, EX0852CE	AC					
R7023	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	D1108	VHDM132K//1		MA132K	AA					
R7024	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	D1109	VHDM132K//1		MA132K	AA					
R7026	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	D1110	VHDM132K//1		MA132K	AA					
R7042	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	COILS AND TRANSFORMER									
R7050	VRS-CY1JF103J	10k	1/16W Metal Oxide	AA	L1101	VPAWM2R7J1R2N		Peaking, 2.7μH	AC					
R7754	VRS-CY1JF000J	0	1/16W Metal Oxide	AA	L1102	VPAWM2R7J1R2N		Peaking, 2.7μH	AC					
R9193	VRS-CY1JF223J	22k	1/16W Metal Oxide	AA	L1103	VPAWM4R7J1R7N		Peaking, 4.7μH	AC					
MISCELLANEOUS PARTS										CONTROLS				
CN301	QSOCN3087TAZZ	Socket, 30Pin		AF	L1104	VPAWM470J6R4N		Peaking, 47μH	AC					
CN302	QPLGN0276TAZZ	Plug, 2Pin		AD	L1105	VPAWM470J6R4N		Peaking, 47μH	AC					
CN702	QSOCN1372TAZZ	Socket, 13Pin		AD	L1106	VPAWM470J6R4N		Peaking, 47μH	AC					
CN802	QSOCN1436TAZZ	Socket, 14Pin		AE	L1107	VPAWM470J6R4N		Peaking, 47μH	AC					
CN1801	QPLGN1476TAZZ	Plug, 14Pin		AG	L1108	VPAWM150J3R2N		Peaking, 15μH	AC					
CN1802	QPLGN1476TAZZ	Plug, 14Pin		AG	L1109	VPAWM2R7J1R2N		Peaking, 2.7μH	AC					
CN5000	QSOCN1286TAZZ	Socket, 12Pin		AD	△ T1100	RTRNZ0127GEZZ		Transformer	AF					
FB101	RBLN-0055TAZZ	Balun, BLN-0055TA		AB	CAPACITORS									
FB102	RBLN-0055TAZZ	Balun, BLN-0055TA		AB	C1100	VCCCCY1HH101J	100p	50V Ceramic	AA					
FB103	RBLN-0055TAZZ	Balun, BLN-0055TA		AB	C1101	VCSATE1AJ476M	47	10V Tantalum	AD					
FB114	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1102	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB201	RBLN-0071TAZZ	Balun, BLN-0071TA		AB	C1103	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB302	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1104	VCKYCY1CB104K	0.1	16V Ceramic	AB					
FB402	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1105	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB404	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1107	VCKYCY1HB103K	0.01	50V Ceramic	AA					
FB551	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1108	VCKYCY1HB103K	0.01	50V Ceramic	AA					
FB601	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1111	VCKYCY1HB561K	560p	50V Ceramic	AA					
FB603	RBLN-0071TAZZ	Balun, BLN-0071TA		AB	C1112	VCKYCY1HB561K	560p	50V Ceramic	AA					
FB701	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1114	VCSATA1AJ106M	10	10V Tantalum	AC					
FB702	RBLN-0071TAZZ	Balun, BLN-0071TA		AB	C1115	VCSATA1AJ106M	10	10V Tantalum	AC					
FB802	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1116	VCKYCY1CF224Z	0.22	16V Ceramic	AA					
FB804	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1117	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB815	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1118	VCKYCY1HB102K	1000p	50V Ceramic	AA					
FB816	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1119	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3100	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1120	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3101	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1121	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3201	RBLN-0052TAZZ	Balun, BLN-0052TA		AC	C1122	VCCCCY1HH820J	82p	50V Ceramic	AA					
FB3202	RBLN-0071TAZZ	Balun, BLN-0071TA		AB	C1123	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3206	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1124	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3207	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1125	VCKYCY1CF224Z	0.22	16V Ceramic	AA					
FB3208	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1126	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB3209	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1127	RC-KZ0052TAZZ	4.7	16V Ceramic	AC					
FB3210	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1128	RC-KZ0046TAZZ	4.7	35V Ceramic	AD					
FB3212	RBLN-0056TAZZ	Balun, BLN-0056TA		AC	C1129	VCKYCY1CF104Z	0.1	16V Ceramic	AA					
FB6001	RBLN-0056TAZZ	Balun, BLN-0056TA		AC										
FB6002	RBLN-0056TAZZ	Balun, BLN-0056TA		AC										
J6001	QJAKE0263GEZZ	Jack		AE										
J6002	QJAKE0062TAZZ	Jack		AF										
R624	RBLN-0006TAZZ	Balun, BLN-0006TA		AB										
R872	RBLN-0071TAZZ	Balun, BLN-0071TA		AB										
S501	QSW-M0024TAZZ	Switch, LCD		AE										
S502	QSW-M0024TAZZ	Switch, LD		AE										
S1001	QSW-M0024TAZZ	Switch, Tray		AE										
TP401	QPLGN0876TAZZ	Plug, 8Pin		AE										

Ref. No.	Part No.	★	Description	Code
DUNTK5870KE52 LCD PWB UNIT(Continued)				
C1130	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1131	VCCCCY1HH330J	33p	50V Ceramic	AA
C1132	RC-KZ0052TAZZ	4.7	16V Ceramic	AC
C1133	RC-KZ0052TAZZ	4.7	16V Ceramic	AC
C1134	RC-KZ0052TAZZ	4.7	16V Ceramic	AC
C1135	RC-KZ0046TAZZ	4.7	35V Ceramic	AD
C1136	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1137	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1138	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1139	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1140	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1141	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1142	VCKYCY1AF105Z	1	10V Ceramic	AC
C1143	VCCCCY1HH330J	33p	50V Ceramic	AA
C1144	VCCCCY1HH330J	33p	50V Ceramic	AA
C1145	VCKYCY1HB102K	1000p	50V Ceramic	AA
C1146	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1147	VCKYCY1HB561K	560p	50V Ceramic	AA
C1148	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1149	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1150	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1151	VCCCCY1HH101J	100p	50V Ceramic	AA
C1152	VCKYCY1HB102K	1000p	50V Ceramic	AA
C1153	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1154	VCKYCY1AF105Z	1	10V Ceramic	AC
C1155	VCCCCY1HH221J	220p	50V Ceramic	AA
C1156	VCCCCY1HH271J	270p	50V Ceramic	AA
C1157	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1158	VCKYCY1EF104Z	0.1	25V Ceramic	AA
C1159	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1160	VCKYCY1EF104Z	0.1	25V Ceramic	AA
C1161	VCKYCY1CF474Z	0.47	16V Ceramic	AB
C1162	VCKYCY1EF104Z	0.1	25V Ceramic	AA
C1163	RC-KZ0084TAZZ	1	25V Ceramic	AC
C1164	RC-KZ0084TAZZ	1	25V Ceramic	AC
C1165	VCCCCY1HH330J	33p	50V Ceramic	AA
C1166	VCKYCY1AF105Z	1	10V Ceramic	AC
C1167	VCKYCY1AF105Z	1	10V Ceramic	AC
C1169	VCSATA1EJ105M	1	25V Tantalum	AC
C1170	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1171	VCKYCY1CF104Z	0.1	16V Ceramic	AA
C1174	VCCCCY1HH101J	100p	50V Ceramic	AA
C1175	VCCCCY1HH101J	100p	50V Ceramic	AA
C1176	VCCCCY1HH101J	100p	50V Ceramic	AA
C1177	VCCCCY1HH101J	100p	50V Ceramic	AA
C1178	VCCCCY1HH101J	100p	50V Ceramic	AA
C1179	VCCCCY1HH101J	100p	50V Ceramic	AA
C1180	VCCCCY1HH101J	100p	50V Ceramic	AA
C1181	VCSATE1AJ476M	47	10V Tantalum	AD
C1182	VCCCCY1HH101J	100p	50V Ceramic	AA
C1183	VCCCCY1HH101J	100p	50V Ceramic	AA
C1184	VCCCCY1HH101J	100p	50V Ceramic	AA
C1185	VCCCCY1HH101J	100p	50V Ceramic	AA
C1186	VCKYCY1CF334Z	0.33	16V Ceramic	AA
C1187	VCKYCY1CF334Z	0.33	16V Ceramic	AA
C1188	VCKYCY1CB104K	0.1	16V Ceramic	AB
C1189	VCCCCY1HH100D	10p	50V Ceramic	AA
C1191	VCSATE1AJ476M	47	10V Tantalum	AD
C1192	VCSATE1CJ226M	22	16V Tantalum	AE

RESISTORS

R1101	VRS-CY1JF000J	0	1/16W	Metal Oxide	AA
R1111	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1112	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1113	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1114	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1115	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1116	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1117	VRS-CY1JF273J	27k	1/16W	Metal Oxide	AA
R1118	VRS-CY1JF222J	2.2k	1/16W	Metal Oxide	AA
R1119	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA
R1120	VRS-CY1JF561J	560	1/16W	Metal Oxide	AA

Ref. No.	Part No.	★	Description	Code
R1121	VRS-CY1JF222J	2.2k	1/16W	Metal Oxide AA
R1122	VRS-CY1JF561J	560	1/16W	Metal Oxide AA
R1123	VRS-CY1JF561J	560	1/16W	Metal Oxide AA
R1124	VRS-CY1JF561J	560	1/16W	Metal Oxide AA
R1125	VRS-CY1JF561J	560	1/16W	Metal Oxide AA
R1126	VRS-CY1JF221J	220	1/16W	Metal Oxide AA
R1127	VRS-CY1JF224J	220k	1/16W	Metal Oxide AA
R1128	VRS-CY1JF105J	1M	1/16W	Metal Oxide AA
R1129	VRS-CY1JF391J	390	1/16W	Metal Oxide AA
R1130	VRS-CY1JF562F	5.6k	1/16W	Metal Oxide AA
R1131	VRS-CY1JF473J	47k	1/16W	Metal Oxide AA
R1132	VRS-CY1JF392J	3.9k	1/16W	Metal Oxide AA
R1133	VRS-CY1JF683J	68k	1/16W	Metal Oxide AA
R1134	VRS-CY1JF273J	27k	1/16W	Metal Oxide AA
R1135	VRS-CY1JF564J	560k	1/16W	Metal Oxide AA
R1136	VRS-CY1JF564J	560k	1/16W	Metal Oxide AA
R1137	VRS-CY1JF683J	68k	1/16W	Metal Oxide AA
R1138	VRS-CY1JF105J	1M	1/16W	Metal Oxide AA
R1139	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1140	VRS-CY1JF103J	10k	1/16W	Metal Oxide AA
R1141	VRS-CY1JF102J	1k	1/16W	Metal Oxide AA
R1142	VRS-CY1JF222J	2.2k	1/16W	Metal Oxide AA
R1143	VRS-CY1JF272J	2.7k	1/16W	Metal Oxide AA
R1144	VRS-CY1JF332J	3.3k	1/16W	Metal Oxide AA
R1145	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1146	VRS-CY1JF331J	330	1/16W	Metal Oxide AA
R1147	VRS-CY1JF100J	10	1/16W	Metal Oxide AA
R1148	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1149	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1150	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1151	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1152	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1153	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1154	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1155	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1156	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1157	VRS-CY1JF101J	100	1/16W	Metal Oxide AA
R1158	VRS-CY1JF221F	220	1/16W	Metal Oxide AA
R1159	VRS-CY1JF221F	220	1/16W	Metal Oxide AA
R1160	VRS-TW2ED220J	22	1/4W	Metal Oxide AB
R1161	VRS-CY1JF221F	220	1/16W	Metal Oxide AA
R1162	VRS-CY1JF221F	220	1/16W	Metal Oxide AA
R1163	VRS-CY1JF333J	33k	1/16W	Metal Oxide AA
R1164	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1165	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1166	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1167	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1168	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1169	VRS-CY1JF000J	0	1/16W	Metal Oxide AA
R1170	VRS-CY1JF561J	560	1/16W	Metal Oxide AA

MISCELLANEOUS PARTS

CN1100	QPLGN1476TAZZ	Plug, 14Pin	AG
CN1101	QPLGN1476TAZZ	Plug, 14Pin	AG
CN1102	QPLGN0263TAZZ	Plug, 2Pin	AB
CN1103	QPLGN0263TAZZ	Plug, 2Pin	AB
CN1104	QSOCN3272TAZZ	Socket, 32Pin	AF
CN1105	QSOCN0686TAZZ	Socket, 6Pin	AC
FB1101	RBLN-0053TAZZ	Balun, BLN-0053TA	AB
FB1102	RBLN-0053TAZZ	Balun, BLN-0053TA	AB
FB1121	RBLN-0052TAZZ	Balun, BLN-0052TA	AC
FB1122	RBLN-0052TAZZ	Balun, BLN-0052TA	AC
FB1123	RBLN-0052TAZZ	Balun, BLN-0052TA	AC
FB1124	RBLN-0052TAZZ	Balun, BLN-0052TA	AC
TP1191	QPLGN0876TAZZ	Plug, 8Pin	AE

DUNTK5755XJ6D**OPERATE PWB UNIT****DIODES**

D5001	VHDDA221///-1	DA221	AB
D5002	VHDDA221///-1	DA221	AB
D5003	VHDDA221///-1	DA221	AB
D5004	VHDDA221///-1	DA221	AB

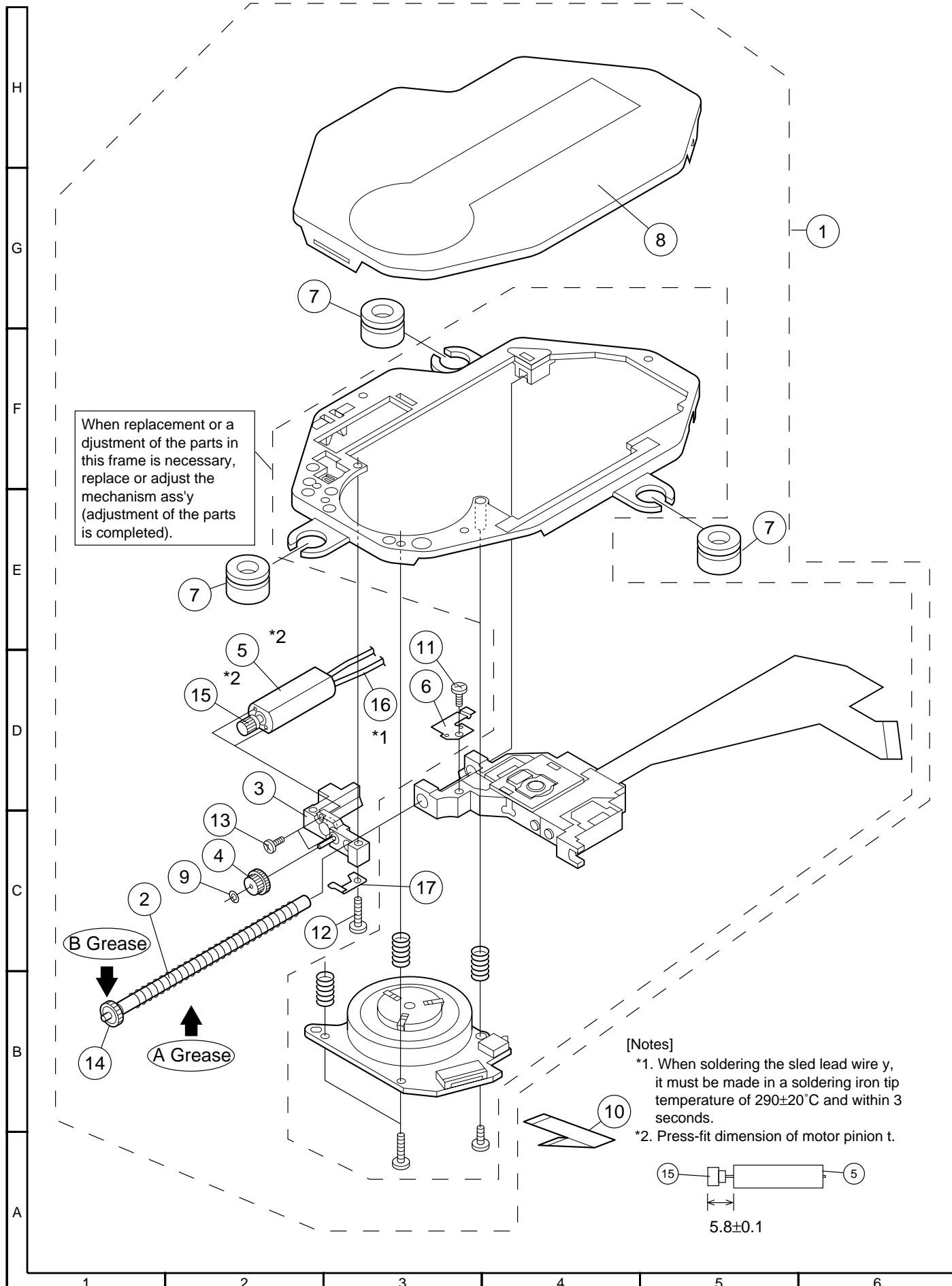
RESISTORS

R5010	VRS-CY1JF122J	1.2k	1/16W	Metal Oxide	AA
R5011	VRS-CY1JF821J	820	1/16W	Metal Oxide	AA
R5012	VRS-CY1JF681J	680	1/16W	Metal Oxide	AA

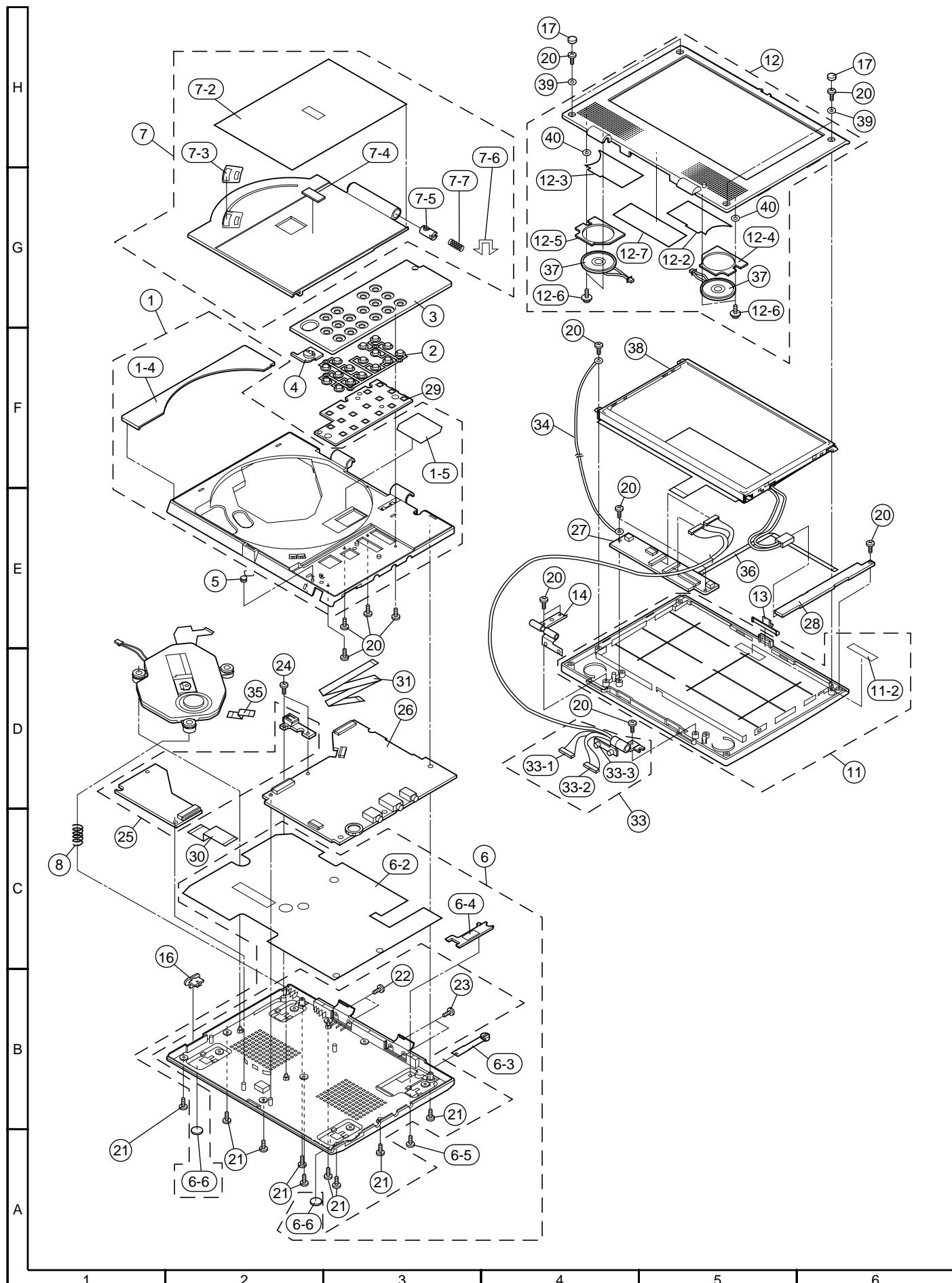
Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code					
DUNTK5755XJ6D OPERATE PWB UNIT(Continued)														
R5013	VRS-CY1JF471J	470	1/16W Metal Oxide	AA	RESISTORS									
MISCELLANEOUS PARTS														
CN5001	QSOCN1286TAZZ	Socket, 12Pin	AD		△ R9001	VRS-TV2JD103J	10k	1/16W Metal Oxide	AA					
S5001	QSW-K0096TAZZ	Switch, LCD Size	AC		△ R9002	VRS-TV2JD152J	1.5k	1/16W Metal Oxide	AA					
S5002	QSW-K0096TAZZ	Switch, LCD Light	AC		△ R9003	VRS-TV2JD222J	2.2k	1/16W Metal Oxide	AA					
S5003	QSW-K0096TAZZ	Switch, DVD/TV	AC		△ R9004	VRS-TV2JD511J	510	1/16W Metal Oxide	AA					
S5004	QSW-K0096TAZZ	Switch, Return	AC		△ R9005	VRS-TV2JD222J	2.2k	1/16W Metal Oxide	AA					
S5005	QSW-K0096TAZZ	Switch, Enter	AC		△ R9006	VRS-TV2JD511J	510	1/16W Metal Oxide	AA					
S5006	QSW-K0096TAZZ	Switch, Left	AC		R9007	VRS-TV2JD822J	8.2k	1/16W Metal Oxide	AA					
S5007	QSW-K0096TAZZ	Switch, Play	AC		R9008	VRS-TV2JD822J	8.2k	1/16W Metal Oxide	AA					
S5008	QSW-K0096TAZZ	Switch, Right	AC		R9009	VRS-TV2JD102J	1k	1/16W Metal Oxide	AA					
S5009	QSW-K0096TAZZ	Switch, Stop	AC		R9010	VRS-TV2JD102J	1k	1/16W Metal Oxide	AA					
S5010	QSW-K0096TAZZ	Switch, Down	AC		R9011	VRS-TV2JD102J	1k	1/16W Metal Oxide	AA					
S5011	QSW-K0096TAZZ	Switch, Still/Pause	AC		R9013	VRS-TV2JD103J	10k	1/16W Metal Oxide	AA					
S5012	QSW-K0096TAZZ	Switch, Up	AC		R9014	VRS-TV2JD102J	1k	1/16W Metal Oxide	AA					
S5013	QSW-K0096TAZZ	Switch, Skip Forward	AC		R9015	VRS-TV2JD102J	1k	1/16W Metal Oxide	AA					
S5014	QSW-K0096TAZZ	Switch, Top Menu	AC		R9016	VRSTS2AD1501F	1.5k	1/16W Metal Oxide	AA					
S5015	QSW-K0096TAZZ	Switch, Skip Back	AC		R9017	VRSTS2AD1001F	1k	1/16W Metal Oxide	AA					
S5016	QSW-K0096TAZZ	Switch, Menu	AC		R9018	VRSTS2AD2871F	2.87k	1/16W Metal Oxide	AA					
RDENC0579GEZZ DC/DC CONVERTER PWB UNIT														
INTEGRATED CIRCUIT														
IC9001	ODLTL1451ACPW	TL1451AC, Control	AL		MISCELLANEOUS PARTS									
TRANSISTORS														
△ Q9001	0DLPA1710//1	UPA1710	AH		△ F9001	0DLFA1102SNEZ	Fuse, 4A	AH						
△ Q9002	0DLMZ4///1	IMZ4	AD		△ F9002	0DLFA1082SNEZ	Fuse, 1A	AF						
△ Q9003	0DLAT1026R/-1	HAT1026R	AK		△ SW9001	0DL-S1054SNEZ	Switch	AH						
△ Q9004	0DLMZ4///1	IMZ4	AD		△ VR9001	0DL-M1032SNEZ	Volume, 2.2k	AD						
△ Q9005	0DLMC3N///1	UMC3N	AD		△ CN9001	QJAKC1005YCZZ	DC Jack, 3Pin	AK						
△ Q9006	0DLAT1026R/-1	HAT1026R	AK		△ CN9002	0DLCM1676SN1D	Connector, 14Pin	AF						
DIODES														
△ D9001	0DLSFPM62//1	SFPM62	AD		0DLW-1677SNEZ	Cable(Brown)	AC							
△ D9002	0DLSFPB62//1	SFPB62	AE		0DLW-1678SNEZ	Cable(Red)	AC							
△ D9003	0DLSFPB72//1	SFPB72	AE		0DLW-1679SNEZ	Cable(Orange)	AC							
D9004	0DLRLZ5.6B/-1	RLZ5.6B	AC											
D9005	0DLRLZ3.9A/-1	RLZ3.9A	AC											
COILS														
△ L9001	0DLLZ1217SNEZ	Coil, LZ1217SN	AH											
△ L9002	0DLLZ1213SNEZ	Coil, LZ1213SN	AG											
△ L9003	0DLLZ1214SNEZ	Coil, LZ1214SN	AK											
CAPACITORS														
△ C9002	VCKYTV1EB104K	104k 25V Ceramic	AB											
△ C9003	VCKYTV1CB224K	224k 16V Ceramic	AB											
△ C9004	0DLE1E227PWFA	220 25V Electrolytic	AD											
△ C9005	VCKYTQ1HB102K	102k 50V Ceramic	AA											
△ C9006	0DLSZ1001SNEZ	100 10V Electrolytic	AK											
△ C9007	VCKYTQ1HB102K	102k 50V Ceramic	AA											
△ C9008	0DLSZ1001SNEZ	100 10V Electrolytic	AK											
C9009	VCKYTV1EB104K	104k 25V Ceramic	AB											
C9010	VCKYTV1EB104K	104k 25V Ceramic	AB											
C9011	0DLE1E475SNZT	4.7 25V Electrolytic	AD											
C9012	VCKYTV1EB104K	104k 25V Ceramic	AB											
C9013	0DLE1E475SNZT	4.7 25V Electrolytic	AD											
C9014	VCCCTV1HH471J	471J 50V Ceramic	AA											
C9015	VCKYTV1HB223K	223k 50V Ceramic	AB											
C9016	VCKYTV1HB223K	223k 50V Ceramic	AB											
C9017	VCKYTV1EB104K	104k 25V Ceramic	AB											
C9018	VCKYTV1HB223K	223k 50V Ceramic	AB											
C9019	VCKYTV1EB104K	104k 25V Ceramic	AB											

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
SUPPLIED ACCESSORIES									
△	QACCD3062GEZZ		AC Power Cord	AN	1	CCABA1113GE04		Cabinet A Ass'y	AZ
	QCNW-8340GEZZ		S-Video/Video Cord	AS	1-4	HDECQ2296GES		Disc Decoration Panel	AM
	QCNW-8341GEZZ		Audio Cord	AP	1-5	TLABS0421GEZZ		Laser Caution Label	AD
	RRMCG1223GESA		Remote Control Unit	AW	2	JBTN-2989GESB		Key Tree	AN
	TINS-3923GEZZ		Operation Manual	AE	3	CPNLC2866GE01		Operation Panel Ass'y	AR
	TiNS-3926GEZZ		Operation Manual	AM	4	JBTN-2990GESB		Open Button	AD
△	UADP-0194GEZZ		AC Adapter	BK	5	MSPRD0198GEZZ		Lock Release SPR	AC
					6	CCABB1235GE02		Cabinet B Ass'y	AY
PACKING PARTS (NOT REPLACEMENT ITEM)									
	SPAKC4566GEZZ		Packing Case	—	6-2	PZETK0012GEZZ		Main PWB Isolating Sheet	AL
	SPAKF0195GEZZ		Packing Material	—	6-3	GLEGPM9055CESC		Stand	AF
	SPAKX1079GEZZ		Packing Add.	—	6-4	LHLDZ1718CEZZ		Stand Holder	AC
	SSAKA0160CEZZ		Polystyrene Sack	—	6-5	LX-HZ3090CEFF		M1.7-4B Tight Screw	AA
	SSAKA0100TAZZ		Polystyrene Bag, Accessories	—	6-6	PGUMMM0059GEZZ		Stopper Rubber	AB
	TGAN-3286GEZZ		Guarantee Card	—	7	CFTAT1035GE01		Disc Cover Ass'y	AY
MECHANISM PARTS									
1	DMECD0004GE02		Mechanism Ass'y	BV	7-2	HDECPO266GES		Decoration Plate	AM
2	NSFTD0063GEZZ		Main Guide	AH	7-3	HDECPO262GESB		Disc Window	AD
3	LHLDZ2070GEZZ		Sled Unit	AD	7-4	HBDGS3017GES		DVD Badge	AG
4	NGERH1328GEZZ		Intermediate Gear	AC	7-5	PGIDM0183GEZZ		Ratchet Housing	AE
5	RMOTV1037GEZZ		Sled Motor	AN	7-6	LSTPP0012GEZZ		Ratchet Stopper	AE
6	MSPRP0199GEZZ		Grip Spring	AC	7-7	MSPRC0227GEZZ		Ratchet SPR	AB
7	PCUSG0004GEZZ		Insulator	AC	8	MSPRC0245GEZZ		Spring	AC
8	PCOVP3021GEZZ		PU Cover	AF	11	CCABC1002GE01		Cabinet C Ass'y(LCD, Rear)	AX
9	LX-WZ1053GE00		Cut Washer	AA	11-2	HBDGB3032GESE		SHARP Logo Badge	AF
10	QCNW-8097GEZZ		Spindle Motor FFC	AE	12	CCABD1005GE01		Cabinet D Ass'y(LCD Panel)	AZ
11	XAPSF17P03000		Screw M1.7 X L3	AA	12-2	PCOVP0102GEZZ		Speaker Cover R	AC
12	XAPSN17P06000		Screw M1.7 X L6 Ni Plating	AB	12-3	PCOVP0103GEZZ		Speaker Cover L	AC
13	LX-BZ3220GEFF		Screw M1.2 X L2.7	AB	12-4	PSPA0102GEZZ		Speaker Spacer R	AD
14	NGERH1327GEZZ		Main Guide Gear	AC	12-5	PSPA0103GEZZ		Speaker Spacer L	AD
15	NGERH1329GEZZ		Motor Pinion	AC	12-6	LX-HZ3094CEFD		Collar B Tight Screw	AA
16	QCNW-8081GEZZ		Sled Lead Wire	AE	12-7	PCOVP0106GEZZ		Speaker Cover M	AE
17	MSPRP1217GEZZ		Earth Spring	AD	13	JBTN-2994GES		LCD Lock Button	AE
	ZGLYC-23-05GE		Grease (SC141)	AF	14	MHNG-3021GEZZ		Hinge L	AN
					16	JBTN-2993GES		Power SW Knob	AE
					17	PCAPH0102GEZZ		LCD Rubber Cap	AB
					20	XiPSF20P04000		Screw(M2 X 4)	AA
					21	XiPSN20P08000		Screw(M2 X 6)	AA
					22	XiPSN20P06000		Screw(M2 X 8)	AA
					23	LX-HZ0018TAFN		P Tight Screw(M2 X 6)	AA
					24	LX-HZ0030TAFF		B Tight Screw(M2 X 4)	AA
					25	RDENCO579GEZZ		Power Unit	BD
					26	DUNTK5869KE52		Main PWB Unit	—
					27	DUNTK5870KE52		LCD PWB Unit	—
					28	RINV-0003GEZZ		Inverter Unit	BB
					29	DUNTK5755XJ6B		Operate PWB Unit	—
					30	QCNW-8100GEZZ		Power FFC	AE
					31	QCNW-8099GEZZ		Operation FFC	AF
					33	CCNW-8096GE01		LCD-MAIN Harness	AQ
					33-1	QCNW-8096GEZZ		Connecting Cord	AK
					33-2	QCNW-8098GEZZ		Connecting Cord	AK
					33-3	MHNG-1071GEZZ		Hinge R	AG
					34	QCNW-8161GEZZ		Harness for LCD Frame	AC
								Earth	
					35	QCNW-8097GEZZ		Spindle Motor FFC	AE
					36	QCNW-8117GEZZ		Inverter FFC	AF
					37	RSP-Z0005GEZZ		Speaker	AP
					38	RLCDT0001GEZZ		LCD Panel	CS
					39	XWHJJZ21-02040		Washer	AA
					40	XWHSD32-05080		Speaker Washer	AA

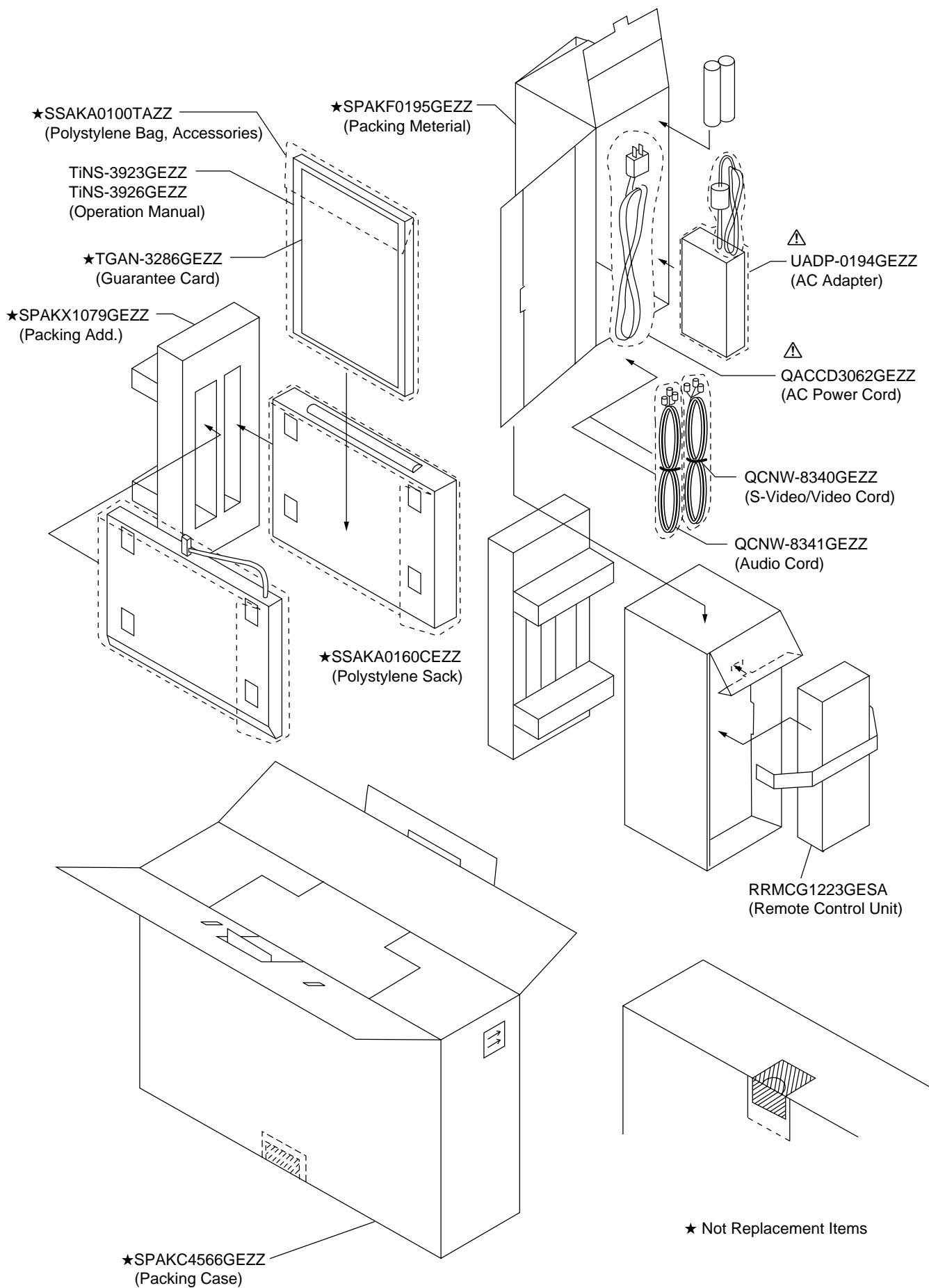
MECHANISM EXPLODED VIEW



CABINET EXPLODED VIEW



16. PACKING OF THE SET



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